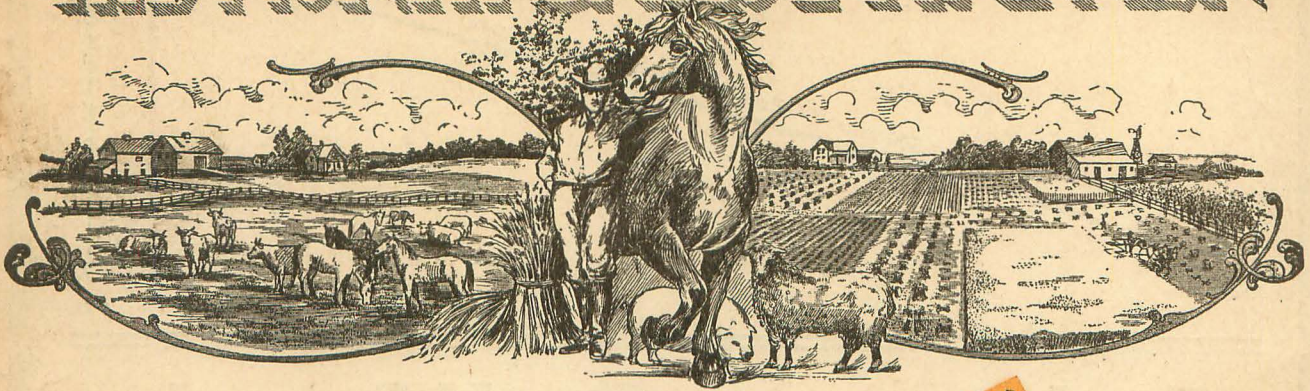


LIBRARY  
UNIVERSITY OF NORTH DAKOTA  
ELLENDALE BRANCH  
ELLENDALE, NORTH DAKOTA

# THE NORTH DAKOTA FARMER



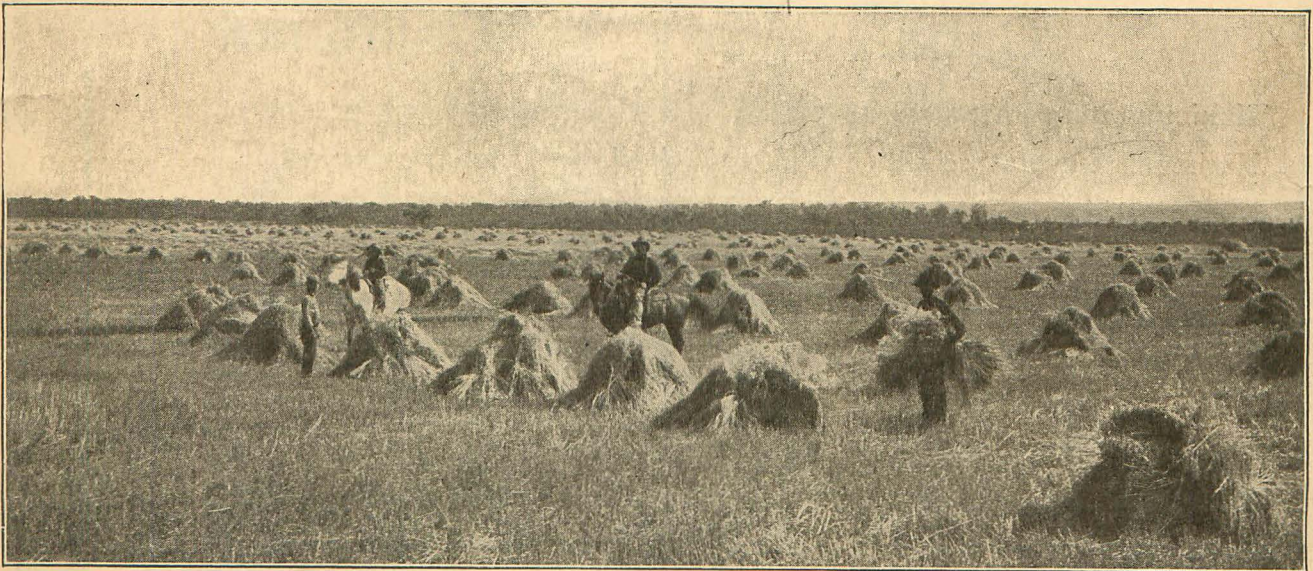
WE CATER ONLY TO THE INTELLIGENT FARMER

Vol. 9, No. 4  
LISBON, N. D.

OCTOBER 15

Alex Alin

50 Cents a Year  
FARGO, N. D.



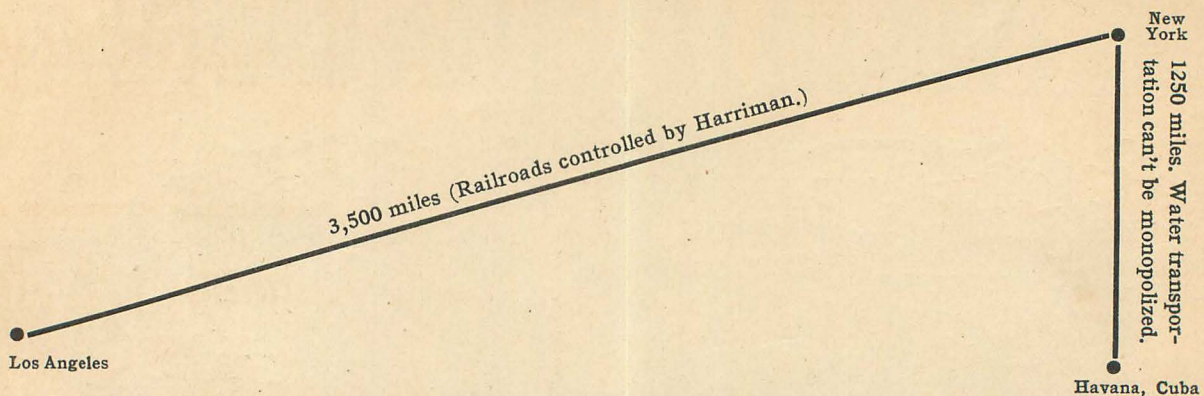
Crop on F. J. Brunt's Farm, Near White Earth, N. D.

## ANNOUNCEMENT.

We are pleased to inform the readers of The North Dakota Farmer that with the December or January issue President Worst of the Agricultural College will begin a series of intensely interesting articles on his recent European tour. These articles will be illustrated from photographs taken on the trip. The tour was undertaken in the interest of North Dakota farmers and the articles are written especially for The North Dakota Farmer. There is no closer observer in the state, and none more capable of clearly expressing himself, than President Worst. Therefore a rich treat is in store for our readers.

978.4  
N814  
Graham





# Cuba vs. California

## COMPETITORS IN CITRUS FRUITS.

### Cuba

Maximum temperature 98, (6 yrs.)  
Minimum temperature 46, (6 yrs.)  
No Irrigation.  
No frosts possible.  
No earthquakes.  
1250 miles to New York.  
Water transportation.  
Three days in transit to New York.  
No jerking and jaring of fruit.  
Even temperature in transit.  
Cuba to Europe 3500 miles, water tran.

### California

Maximum temperature 109.  
Minimum temperature 28.  
Irrigation necessary.  
Frost occasionally.  
Earthquakes frequently.  
3500 miles to New York.  
Refrigerator cars.  
Fourteen days in transit.  
Constant jerking and jaring.  
Uneven temperature in transit.  
California to New York, 3500 by rail.

Oranges grow wild in Cuba.

Orange groves in bearing in California are worth \$500 to \$1500 per acre. What will they be worth in Cuba?

Write for Pamphlet and maps. All about Cuba,

# North Dakota Company,

Gray Block,

VALLEY CITY, NORTH DAKOTA

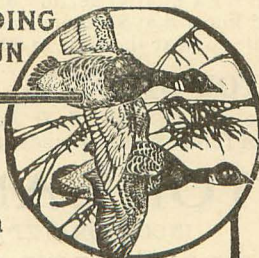


## Principal Contents for October

	Page		Page
Agricultural Club - - -	10	North Dakota's Forest Problem	11
Among Our Advertisers - - -	32	Oils, Paints and Paint Pigments -	6
Editorials - - - - -	16	Poultry Department - - -	30
Farmers at the First Table -	3	Preparing of Cuttings - - -	14
Fight with the Grain Trust in Iowa	18	Preparing the Vegetable Garden	12
Harvester Trust - - - -	17	Pure Food Department - - -	19
Home Affairs - - - - -	23	Shade Trees and Gardens -	11
Lessons from the Fairs - - -	4	Swine Department - - - -	29
Livestock Department - - -	25	Preparing the Vegetable Garden	12

# Remington

## AUTOLOADING SHOT GUN



To The Man Who Wishes  
A Good Modern, All Around Shot Gun

for field and trap shooting, especially adapted for wild fowl, we present the

## Remington Autoloading Shot Gun

It is reloaded by its own recoil without working a lever or slide. A large part of the recoil is thus taken of the shooter's shoulder. It is hammerless, shoots 5 shots and has an absolutely safe solid breech. Price, \$40 list, subject to dealers' discounts.

Drop a postal for illustrated catalogue.

REMINGTON ARMS COMPANY,

Ilion, New York

Agency, 315 Broadway, New York City.

## A TEAM OF HORSES THE ONLY HELP REQUIRED

to bore wells with the



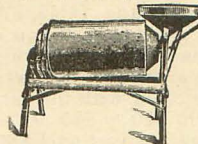
## POWERS

### Boring Machine.

You can run it alone, because the tools operate through center of platform, while the horse walks around it. Bore easily through frozen ground; 100 ft. in 10 hrs. Mounted on wheels, and easily moved from place to place. Write for Catalog. Little Mfg. Co., Box 45, Clarinda, Iowa.

## JUMBO THE GREAT SUCCOTASH SEPARATOR

Capacity 60 bu. per hour.



separates wild or tame oats from wheat and barley, the only perfect cockle separator on the market, to clean your seed wheat, the best flax cleaner made as well as for timothy, clover, etc. The Jumbo has 48 sq. feet of galvanized wire cloth to do the work. Six times as much surface, as any machine made. That's why the Jumbo does the best work and has the greatest capacity of any grain separator and is guaranteed to give satisfaction, or can be returned and money will be refunded. It won't cost you anything to try it and satisfy yourself. Write today for free catalogue to the

**MINNEAPOLIS SEPARATOR CO.,**

2949 Lyndale Ave. S. MINNEAPOLIS, MINN.

## BE A RAILROAD MAN

Firemen and Brakemen

Earn from \$100 to \$185

a month. Graduates of

this school in great de-

mand. Actual railway

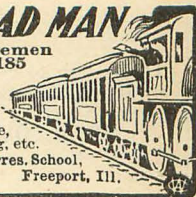
officials teach you by

mail during your spare time,

at small cost. Free catalog, etc.

The Wenhe Railway Corres. School,

Box 750, Freeport, Ill.



## \$6,000 BUYS 300 ACRE FARM

In Nelson county, North Dakota. 150 summer-fallow ready for crop; 140 acre pasture, sheep fence, with 25 acres of young natural timber; 10 acres meadow, more could be broken. House, barn and good water. Farm lies on Stump Lake. \$1,000 down, balance on long time at 5 per cent.

EASTGATE BROS.,

Larimore,

N. D.



## HAY STACK COVERS

Save the Hay and Grain

Write for prices on all

kinds of Canvas

goods.

AMERICAN TENT & AWNING CO.  
307-9-11 Washington Av. N. MINNEAPOLIS, MINN.

IN HANDSOME SINGLE PAIR BOXES MAKE USEFUL INEXPENSIVE HOLIDAY GIFTS

**50¢**

**MODEL B Bull Dog SUSPENDERS**

Just the Thing for His Christmas

**MODEL B Bull Dog Suspenders**

THE STANDARD because they fit, because they contain more and better rubber than other makes, allowing easy, free movement of the body in every position; because they have gold-gilt metal parts, guaranteed not to rust or tarnish, and because the cord ends are stronger than usually found in suspenders, preventing them from fraying and wearing through.

THEY OUTWEAR THREE ORDINARY KINDS, WHICH MEANS THREE TIMES THE SERVICE OF USUAL 50 CENT SORTS.

The Most Comfortable Suspenders Made for Man, Youth or Boy In Light, Heavy or Extra Heavy Weights, Extra Long (No Extra Cost) Sensible, Inexpensive Gifts Every Man and Boy Will Gladly Receive

FOR THE BEST INSIST ON MODEL B BULL DOG SUSPENDER.

**HEWES & POTTER, Dept. 980**  
**87 Lincoln St. Boston, Mass.**

Our useful BULL DOG SUSPENDER COMB AND CASE mailed for 10c, postage. Instructive booklet, "Style, or How to Dress Correctly," free if you mention this publication.

## WHITE

Portable and Stationary Gasoline Engines

"The Old Reliable Line"

An engine built for long heavy service and one that has stood a ten year test of time. For threshing and other farm use the White is the ideal power. Can be run at 1-2 the expense of steam. All parts interchangeable and easily adjusted. Four pails of water cool the 20 horse power size with the White patented cooler. Special oil cooled engine for pumping and other light work. More than 100 designs to choose from.

Globe Iron Works  
Menomonie, Wis.  
Box 79

SIZES 4 to 20 HORSE POWER

NO COMPLICATED DEVICES NO SMALL WORKING PARTS



# The North Dakota Farmer Better in 1908.

FORTY PAGES.

SPECIAL ILLUSTRATED ARTICLES.

BETTER SERVICE.

Every delinquent subscriber is a "rider" instead of a "pusher." Won't you help "push?"

## 22,000 Volts of Electricity

Working Day and Night

For NORTH DAKOTA FARMERS

The Great Government Irrigation Project at Williston is now a Reality. The Main Power plant was set in operation Sept. 30 and water pumped from the Missouri River at the rate of 780 Barrels per Minute.

### WHAT DOES THIS MEAN TO YOU,

Mr. Red River Valley and Central Dakota Farmer? JUST THIS:

It gives you an opportunity—an opportunity that you can take advantage of. HOW? By taking our word for it that you can buy land THIS FALL at \$15 to \$25 per acre that will be irrigated by this water and that after you have taken three crops from it you can sell the same land at \$100 per acre.

You think that's a pretty Strong Statement. It is, but it's true, every word of it. If you're not willing to accept it and want more authority, just write Prof. J. B. Linfield, Director of the Montana Experimental Station at Bozeman, Prof. Linfield is familiar with this land, the climate, the general situation and the possibilities of irrigation. His opinion may be worth from \$70 to \$85 per acre to you. Write him. \$50 an Acre Paid for Land under the Williston Project.

This Company has just paid \$8000 Cash for a quarter section of farm land under the irrigation ditch. We paid it because we made a study of irrigation and know that \$100 per acre will soon be cheap for this same land. You can buy just as good land NOW, but not quite so near the City, at \$15 to \$25 per acre.

### WHY DON'T YOU STUDY UP ON IRRIGATION?

Ask the editors of this magazine and the officials of the N. D. Agricultural College what they think of Irrigation in this state and their opinion of the present and future value of lands under the Government Irrigation Project.

## THE WILLISTON LAND COMPANY,

(INCORPORATED)

WILLISTON, NORTH DAKOTA,

Invite you to come out and look these interesting Irrigation Projects over. They will gladly assist you to secure desirable locations under them.

W. B. OVERSON, President.

JOSEPH W. JACKSON, Vice Pres.

E. R. BROWNSON, Sec'y.

R. M. CALDERWOOD, Treasurer.

E. G. GREENUP, General Manager.

Responsibility of Stockholders \$50,000.00.

LONG-ESTABLISHED.

RESPONSIBLE.

RELIABLE.

## BOVEE'S

## Straw Burning Furnace

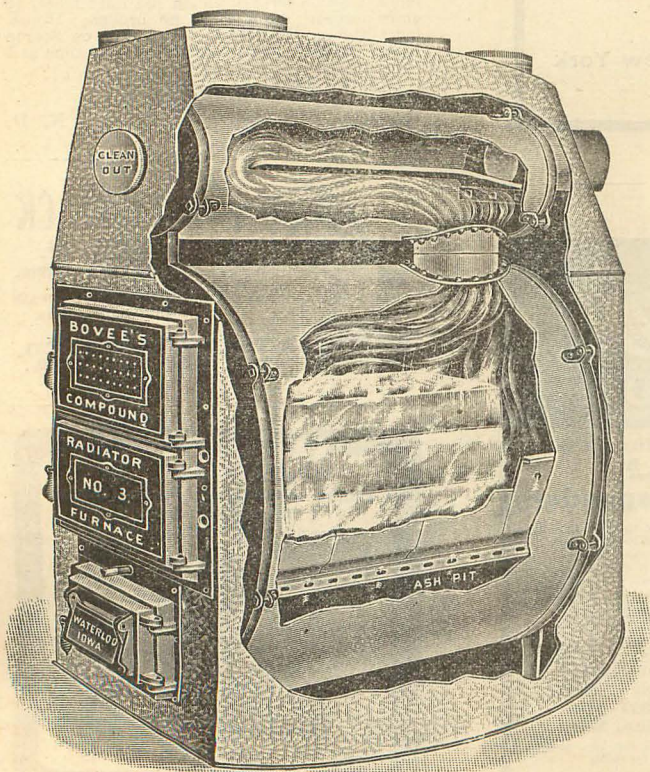
Save all of your fuel bill by burning baled straw. Be independent of Railroad combines. This furnace burns straw baled by any common baler. Will burn bales 17x21 inches. Straw or hay makes neat handy fuel and will hold fire over night. It can be baled for the cost of hauling coal and saves the entire fuel bill. This furnace is also a perfect and very economical wood, coal or lignite coal burner. It has Bovee's Hot Blast Ventilating System and Return Circulating Radiator, giving perfect ventilation and saves one-third of the fuel.

Send for our special prices and illustrated catalog free.

We manufacture the largest and best line of furnaces, 24 styles and sizes.

BOVEE GRINDER & FURNACE WORKS,

Waterloo, Iowa.





# THE NORTH DAKOTA FARMER

Vol. 9, No. 4

LISBON and FARGO, N. D., OCTOBER 15, 1907

50 Cents a Year

## OF GENERAL INTEREST

### FARMERS AT THE FIRST TABLE!

By B. A. Tupper.

Certainly why not? Of all the population of the earth who has a better right?

Of all the occupations of mankind which is so closely connected with the production of that which satisfies the inner man as the farmer?

Come out of your poorly ventilated tobacco poisoned shop or factory where

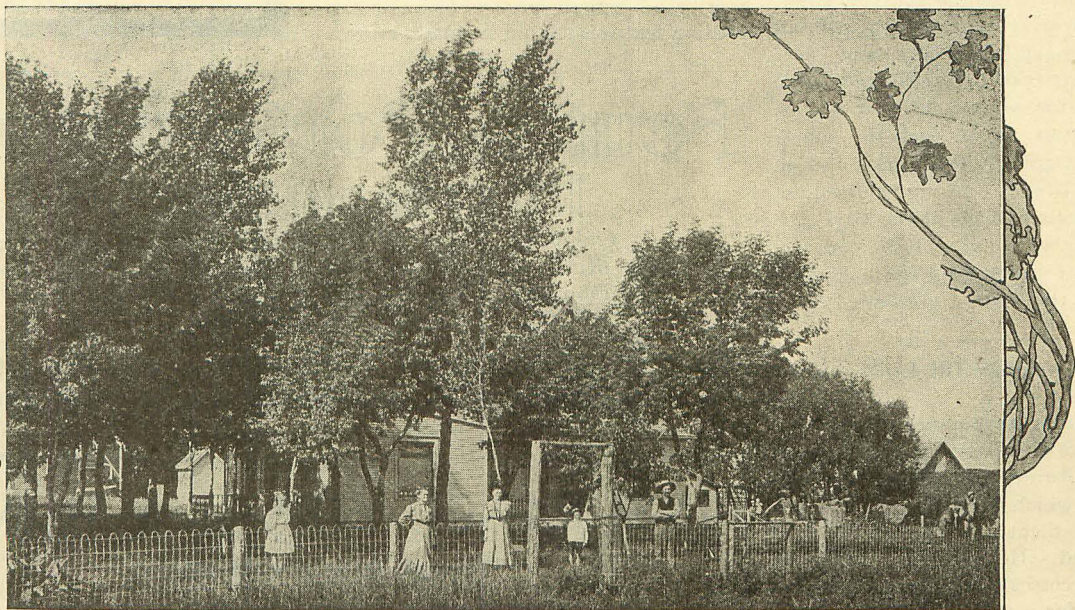
home. You feel an exhilaration which none but those who are shut up in a dingy shop six days in the week can feel. As you pass the limits of the city you feel that the prison door has been left open and you have escaped or rather that you have been allowed a brief parole.

The farmer puts away his team and runs the carriage in the shed. The boys have done the chores and the good

green grass in the pure, free air you snugly tuck your little ones in bed and with the "good night" kiss hear them say, "Oh papa, I wish we could stay here all the time!"

Get up Sunday morning and after watching the farmer feed and care for his stock sit down to a breakfast such as you have not tasted "since you left the farm."

In due time all are ready and you whirl away to church and Sunday School—it may be in an up-to-date church in the village or in a sod school



Shade Trees Add Beauty and Comfort to the Home.

you take the place of a bit of machinery which is too expensive or not yet invented.

Where your time may be bought cheaper than a machine which would do the same work—come out I say and take a look at the farmer's cattle, hogs, horses, calves, pigs, sheep and lambs.

Step into the poultry yard and see the chickens, ducks and geese. Possibly you may be so fortunate as to have a friend or relative who will take you and your family in his carriage on Saturday evening and with a span of Cleveland bays whirl you out to his

wife calls to supper. Watch your children's bright eyes sparkle as they surround the table spread with fresh home-cured ham or perhaps chicken that an hour ago was cackling in the barn yard, the fresh bread and butter, the doughnuts the pie and cake the cream and strawberries. Notice the change in their little appetites and hear the joyful exclamations, of "Oh auntie, how good this milk is!" "Please may I have another doughnut?" and a hundred other childish remarks.

At last supper is over and after an evening spent in romping on the fresh,

house, no difference you feel that there is true Christian fellowship here and with more fervor than you have felt for many a year you join in the song, "Nearer My God to Thee."

After services ride back to the farm home with such an appetite that the hostess is pleased to see her well prepared dinner disappear.

Spend a quiet Sunday afternoon on the farm where man is nearer to God than anywhere else on earth. At last the time draws near when you and your family are to be taken back home (how inappropriate that word



seems now) and see the cloud which passes over the countenances of the little ones who are dearer to you than life and notice the thoughtful expression on the countenance of your brave little wife.

Step inside your own yard gate where your neighbors on either side may hear every word that is spoken.

Feel your heart sink as your friend says "good-by" and drives away and you turn to find your little ones in tears pleading "Papa wont you please buy a nice home like uncle's?"

And you, my thrifty farmer friend, if you have not seen nor felt the emotions of your late guest and if you sometimes feel that farm life has too much drudgery and that you would like to leave the dear old place—if you feel this way I say—just drop into the shop or factory where your friend works (if the "boss" will allow you to do so) and watch. First notice the care-worn expression on each countenance. See the foreman approach your friends and commence criticizing and swearing at him. Hear this biggoted piece of humanity? curse until the air is fairly blue the man whom you know to be his superior in every way, mentally morally and physically, and perhaps see your friend "fired" and "out of a job" for several days or weeks while expenses go on just the same. After investigating each phase of the city man's life, if you are inclined to leave the farm and go to the city just consult your wife and children on the subject and I am inclined to think they will decide the matter properly.

#### LESSONS FROM THE FAIRS.

County fairs have a very great influence, says the Farmers Review, on the agricultural enterprises of the counties in which they are held. Their influence is silent and unobserved but it is potential. However, not all county fairs are successes. Some of them after being held for a number of years have been abandoned as financial failures. The finances lie at the bottom of success or failure with the fair. The realization of this fact is what leads some fair managers to give away permits for questionable games and shows to be on the grounds. Some of our boards of fair managers, in their scramble for funds, depend to a considerable extent on side shows and fakirs. They admit fakirs of all kinds, including those with wheels of fortune and other gambling devices. They even encourage the presence of gamblers, for a consideration. They thus lower the tone of the fair and make for it many secret enemies among the people that are op-

posed to such things. A clean fair will be the pride of the people and will have their support, while a fair that has all kinds of objectionable features will be poorly supported. The people as a whole will fail to feel an enthusiasm in its support, and this feeling will in time lead to the decadence of the fair. A fair with a bad reputation will survive as long as it comes out ahead each year, but if it comes to a financial set-back it has not the friends necessary to make sacrifices required to keep it going. A fair should be worthy of existence if it is to be continued from year to year. There are few side shows that are worthy to be admitted to the grounds of the fair. If each board of fair managers will give permits to only good shows, shows of real merit, they will increase the attendance at the fairs. It might be advisable to actually give away permits to good shows rather than sell them to the kinds of shows that now follow fairs. A fair to be a success must have many meritorious features and entries and those must be well advertised. More advertising should be done than is done in the case of most of our county fairs. Not only should a fair be advertised as a whole, but the leading features should be made known

to the people. One important matter seems to be overlooked by some of the managers of fairs, and that is the selecting of competent judges of live stock and other things in competition. Too often men are selected because they are neighbors of the managers. There are not many men in any line of agricultural effort that know enough about



**EUREKA HARNESS OIL**

Makes harness proof against heat and moisture. Gives a glossy black finish. Prevents rot. Imparts pliability, strength and durability to leather. Saves bills and mishaps. Keeps a new harness looking new and makes an old harness look like new. Contains nothing rough to cut and chafe. For axle troubles use

#### BOSTON COACH AXLE OIL

Better and more economical than castor oil. Will not gum or corrode. Lasting, reliable, satisfactory. Highest Award World's Columbian Exposition. Sold everywhere—all sizes.

MADE BY

**STANDARD OIL COMPANY**  
Incorporated

## Fout & Porterfield

### Pharmacists.

61 BROADWAY,  
FARGO, N. D.

Perfumes, Colognes, Toilet Water, White Lead, Linseed Oil, Carriage Paint, Mixed Paint, Roof Paint. Choice Cigars, Imported and Domestic. Trusses and Shoulder Braces. Var-nishes, Brushes, Etc.

We Carry a Full Line of Vaccine Virus and Serums.  
Anti-Diphtheritic, Anti-Streptococcus, Anti-Tetanic, Etc.

## INSURANCE FOR \$1 A MONTH

### Good Agents Wanted

In every community to write accident and health insurance. This pays you when laid up from sickness or accident. You do not have to die to get it. Everybody wants it.

WRITE US TODAY.

**The Hatcher Brothers Corporation,**  
EDWARDS BLOCK, FARGO, NORTH DAKOTA

When You Have Hides, Furs, Wool, Sheep Pelts, Tallow, Etc.,  
To Ship, Think of

**The M. H. Redick Hide and Fur Company,**  
GRAND FORKS, NORTH DAKOTA.

The only resident Hide and Fur dealers in the state dealing in Hides, Furs, Wool, etc. exclusively. "Established For Nearly a Quarter of a Century." Send for Price Lists, Tags, etc. Sent Free. When writing this firm mention that you saw their ad in The North Dakota Farmer.



the things they are interested in to judge the different exhibits. This is particularly true of live stock. Expert judges should be hired rather than amateur judges that can be obtained just for the honor of the thing. In the judging of live stock there are few competent men except those that have had training similar to that given in our agricultural colleges. A bad lot of judges will quickly bring a fair into disrepute, and many of our fairs have gone to pieces on that rock. If the judging is bad one year it will affect the fair for several years to come. The man that brings to the fair an animal that should receive first prize and is beaten by inferior animals because the judge is incompetent, will go away a bitter enemy of the fair. If the judge is an amateur the exhibitor will feel the injustice all the more keenly. If he meets defeat at the hands of a judge that has been hired with the idea of getting the best, he at least will not blame the fair management. What is true in the judging of live stock is true in a lesser sense in the judging of other things. Correct judging is the very heart of the competitive feature of the fair, and nothing should be allowed to stand in the way of getting perfection in this. One of the things that will greatly increase the attendance at our county fairs is to have some way of feeding the people, so that a meal on the fair ground will be an attraction rather than something that the eaters shudder at.

Under the present methods of feeding people on the fair grounds, who looks forward with pleasure to a meal there? People buy the food shown there because they are compelled to eat and do not want to pay an extra admission fee to make it possible for them to go outside to eat. Every man that goes to fairs much knows what a meal on the fair ground means. It means wind, dirt, flies in swarms, meats of poor quality, poor butter, often oleomargarine, lukewarm and roily drinking water, insipid coffee, weak tea, insufficient service and high prices. The meals should be more attractive than those obtainable outside, and the prices should be reasonable, say 25 cents. To do this it would be necessary for the management to forego any receipts from restaurant concessions. In most cases the prices for restaurant concessions are so great that the people that take those concessions have to work all kinds of schemes to get even and make a profit. They buy the concessions for the purpose of making a profit out of them. The restaurant arrangements should be under the control of the fair board and should be run with the intention of merely making ends meet but with the object of making a meal on the

fair grounds an attraction. With a moderate price for the meals the people would patronize the restaurants rather than bring their lunches, as many of them do. We need to eliminate many of the crudities now found in our fairs if we are to make them so popular that the people will go to them in all kinds of weather. It is possible to make the county fairs so popular that a failure will be impossible in any year. Every one connected with the fair should try to make it as educational as possible. He should be mindful of the fact that his own children and the children of his neighbors will be present. For their sake he should labor to make the fair one of high ideals. Every county has an abundance of materials from which to draw a magnificent exhibit. Every city and village has the talent to provide no end of amusements and side shows of a high quality. The county fair should represent the best there is in the county.

**WHITE**  
**STATIONARY AND PORTABLE**  
**GASOLINE ENGINES**  
"THE OLD RELIABLE LINE"

Simplest of design recommends the White. All parts interchangeable and easily adjusted. No expert services necessary in installation or on repairs. Uses distillate and low grade oil. Built sizes 2 to 20 horse power, four cycle type, horizontal or vertical designs, for gas or gasoline. Also complete line of launch engines. Catalogue upon request.

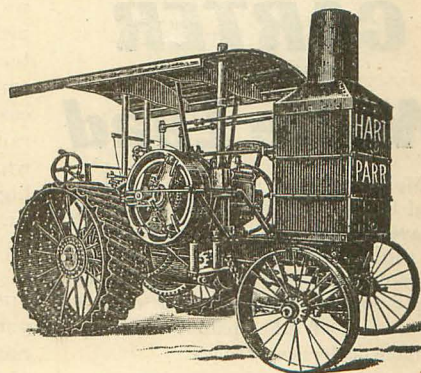
Globe Iron Works Co.  
Menominee, Wis.  
Box 79



## Hart-Parr Gasoline Traction Engine

CAN USE  
Kerosene,  
Gasoline or  
Alcohol  
Oil Cooled.

Enclosed Construction.



An all around farm engine. The best engine manufactured for **PLOWING AND BREAKING.**

Guaranteed to pull as many plows as can be pulled by eighteen horses.

We are general agents for **HART-PARR ENGINES, RUTH FEEDERS, Richmond Automobiles, Lambert Automobiles**  
**MORE BROS**

Wimbledon

N. D.

## Mica Axle Grease

Best lubricant for axles in the world—long wearing and very adhesive.

Makes a heavy load draw like a light one. Saves half the wear on wagon and team, and increases the earning capacity of your outfit.

Ask your dealer for **Mica Axle Grease.**

**STANDARD**  
**OIL CO.**  
Incorporated



### How is This?

Last week Aaker's Business College filled 9 out of 15 positions offered as follows: O. Thorpe with St. Croix Lumber Co., Winton; C. E. Lee with Empire Works, Moorhead; Miss Ethel Cunningham with Board of Trade, Minneapolis; H. H. Haugerud with Bowers Bros., Fargo; M. E. Beebe as teacher in Phillips Academy, New Rockford; Emma Kopperud with E. Smith-Peterson, Park River; Emma Jeston, Pioneer Ins. Co., City, Arthur Johnson with Ellefson Cash Grocery, City; and A. Stoll with Expansion Lumber Co., Expansion, N. D. The above shows what we are doing for our students when nearly all schools are closed doing nothing for their graduates. For a course also in telegraphy address the school at Grand Forks or Fargo, N. D.



# OILS, PAINTS, AND PAINT PIGMENTS.

Dr. C. D. Holley, N. D. A. C., Editor.

## VARNISH. EXTRACT FROM "ANALYSIS OF MIXED PAINTS, COLOR PIGMENTS AND VARNISHES"

By Holley and Ladd

Classification of varnishes. The varnish industry has from its beginning been conducted with as much secrecy as possible, and but little has been published that would enable the average chemist to pass judgment on the different grades and varieties of varnish, and for this reason a short discussion of some of the principal classes of varnish may not be amiss.

Floor varnishes. Goods of this class should have a medium consistency. If heavy they will require a longer time to dry and harden than is desirable, and would be apt to become marred from usage before thoroughly hardened; if too thin they will not afford the desired protection to the wood. In price they are about the same as for first-class interior varnishes, ranging usually from

\$2.00 to \$2.50 per gallon wholesale. Floor varnishes are usually "long-oil" goods, as a high degree of elasticity is required.

Interior varnishes. Varnishes for interior work should be of fairly heavy consistency, so as to stand rubbing. For the best class of work they should be "long oil," altho "short-oil" goods may be used for the under coats. In price they usually range from \$2.00 to \$2.50 per gallon wholesale. Often, especially, in contract work, "No. 1 Coach" goods are used. This term means absolutely nothing, as it stands for no specific grade or quality of varnish. Sold under this name varnishes are put on the market for \$.90 to \$1.10 per gallon, or even less, and are usually high in rosin and benzine or heavier petroleum-products. Polishing varnishes, such as are used for pianos, high-class furniture, etc., are usually of excellent quality, averaging in price from \$2.50 to \$2.75, altho the very best grades may run as high as \$3.50 wholesale.

Interior varnishes being subjected to less strenuous usage than floor finishes, carriage or exterior goods, the tendency has been to lower the standard of quality, until perhaps low grade, inferior goods are the rule, and really high-grade finishes the exception, on the market at the present time. Neither is the size of the company any guarantee that the product is of high value, for many of the best grades of varnishes are made by small concerns who depend on the quality of their goods rather than on extensive advertising for their sales.

Exterior varnishes. These should always be "long-oil" goods. Spar varnishes, which are the usual type of exterior varnishes, should be of medium consistency, tough and elastic, and not easily scratched. In price they usually range from \$3.00 to \$3.75 per gallon wholesale. Carriage varnishes bring the highest price of all varnishes, and their successful manufacture is accomplished by only a comparatively small number of concerns, and but few domestic brands are rated equal to the best imported English goods. Domestic carriage varnishes range from \$4.75 to \$5.75 wholesale, and the best imported English goods at about \$7.25 per gallon.

Short volume. It is a lamentable fact that varnish manufacturers almost invariably defraud the consumer by putting out their packages short in volume. Of eleven samples purchased by the author on the open market, in the original package none were full

measure. The amount of shortage is given in the following table.

No. Description Per cent Shortage of Contents.

1	Floor Varnish.....	3.2
2	Floor Varnish.....	4.2
3	Floor Varnish.....	2.1
4	Interior Varnish.....	3.2
5	Exterior Varnish.....	2.1
6	Coach Varnish.....	2.1
7	Interior Varnish.....	8.4
8	Floor Varnish.....	3.2
9	Exterior Varnish.....	4.2
16	Floor Varnish.....	9.5
18	Floor Varnish.....	13.3
	Average.....	5.0



## Only the Rich Can Afford Poor Paint

If one is rich enough to repaint his buildings every year for the pleasure of having a change of color scheme, the quality of the paint used may cut little figure. But if it is desirable to cut the painting bills down to the least amount possible per year, it is of the utmost importance that the paint be made of the purest of White Lead and the best of Linseed Oil. There are imitations—hosts of them—in the form of alleged White Lead, and there are substitutes—another long list—in the form of ready-prepared paints.

We guarantee our White Lead to be absolutely pure, and the Dutch Boy on the side of every keg is your safeguard. Look for him.

### SEND FOR BOOK

"A Talk on Paint," gives valuable information on the paint subject. Sent free upon request.

### NATIONAL LEAD COMPANY

in whichever of the following cities is nearest you:

New York, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Philadelphia (John T. Lewis & Bros. Co.), Pittsburgh (National Lead & Oil Co.)



All lead packed in 1907 bears this mark

## How to Know Paint that Will Wear

The wear of paint depends on pure Lead and pure Linseed Oil. Ready-mixed paint containing substitutes will always crack, scale and chip.

Paint that wears best, covers most, looks best and costs least is made of

## CARTER Strictly Pure White Lead

More used than any other brand of lead because practical painters know it is every atom paint. Comes ready to be thinned with pure Linseed Oil and colored to suit your taste. Costs less to apply, and two coats does the work of three coats of other paints. Sold by reliable dealers everywhere.

Booklet, "Pure Paint," sent FREE. Tells how to save money on your paint bill; how to detect impure lead. Shows six beautiful color schemes.

Address Dept. W

CARTER WHITE LEAD CO., Chicago, Ill.

Factories: Chicago—Omaha.



Five per cent shortage in measure represents a very fair profit to the manufacturer in itself.

Significance of lime in varnishes. The addition of five to six per cent of quicklime to melted rosin makes it considerably harder. The compound formed easily dissolves in linseed oil (at the present time wood oil is largely used), and when properly thinned forms the base of about all the cheap varnishes on the market. Such varnishes are characterized by giving a brilliant surface, easily scratched, and in a short time liable to crack badly. The relation between the percentage of lime (CaO) in the varnish and its toughness and elasticity is not marked enough to enable the chemist to pass judgment on its working qualities from the amount of lime it contains.

Sixteen of the leading varnishes on the market were tested out for toughness and elasticity, and then the amount of calcium oxide determined in each, the results obtained being given in the following table.

Of twelve brands of floor varnishes examined by the author, four were altogether too thin for the purpose intended; and of fourteen interior finishes, four were exceedingly thin, and several of the remainder were below average in this respect.

Of a total of twenty-six of the leading brands of floor, exterior and interior varnishes tested out by the author, seven were considered first class in all respects, eight were medium or just fair quality, while eleven were unquestionably poor and inferior both as regards working and the quality of the film after drying. Of the above eleven, eight were interior finishes.

The twenty-six with but two exceptions flashed at room temperature, a fact which is worthy of considerable attention on the part of the consuming public as regards fire risk.

#### SOME FALSE STATEMENTS ABOUT PAINT MATTERS

E. F. Ladd

The Paint Manufacturers Association thru the Bureau of Promotion and Development are sending out some paint literature. This is a very proper thing to do for there is a chance to educate the public, but when they deliberately quote articles and assume the responsibility which are absolutely false, they must expect to be called upon to furnish their information.

In such a document, entitled "Paint Legislation," an address by Ernest W. Heath before the Michigan Retail Hardware Association, they include an editorial from the American Artisan and Hardware Record, containing the following:

"Up to the present time the main benefits derived from the North Dakota Statute appear to have been reaped by outside mail order houses. This was certainly not the intention of the legislators when they passed the bill."

This statement is absolutely false, and no men know it better than those who are distributing this document. On the one hand they make use of the bulletins published by the North Dakota Experiment Station to "knock" the mail-order houses. They then turn around and

claim that the chief benefits under the North Dakota Law has come to the mail-order houses. I say, without fear of contradiction, that the sale, by mail-order houses, of paints in North Dakota during the past year has not been one-third what it was before the enactment of the Paint Law.

I challenge Ernest W. Heath or any of the Association of Paint Manufacturers representing the Bureau of Promotion and Development to show to the contrary. It looks to me as tho this was a

## BRADLEY & VROOMAN PAINT

Is all paint—good paint.  
The best paint it is possible to make.  
Every gallon is full measure—full value.

### EVERY CAN GUARANTEED!

If you paint your house, barn, or anything else, with Bradley & Vrooman Paint, you will get better results in both wear and appearance than you will if you use any other.

Bradley & Vrooman Co.,  
Paint Makers  
2629-35 Dearborn St.,—Chicago.



## Things Worth Knowing about The Best Paint



**A**LL good paint is mixed in pure linseed oil. Linseed oil is the life of any paint. The paint that is mixed in the best linseed oil is the best paint; the brightest; the most lasting; the cheapest. We make our own linseed oil—from Northwestern flax—press it in our own mills and mix it ourselves. That's why we know that Minnesota Linseed Oil Paint is better than other paint.

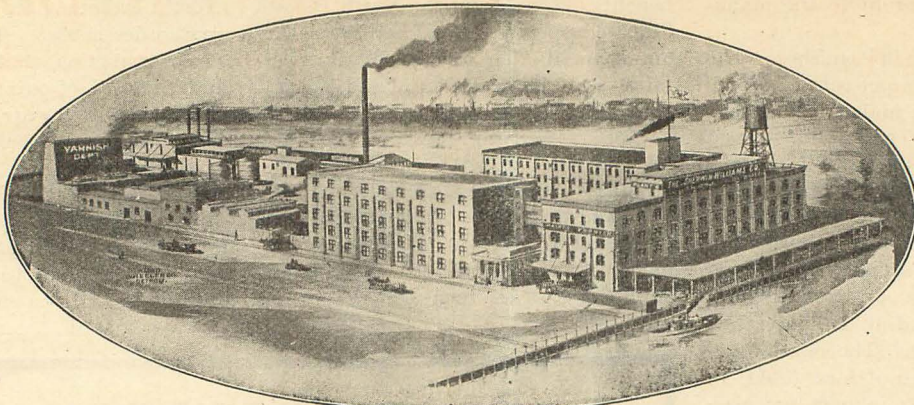
In this pure Linseed Oil we grind guaranteed pure White Lead, pure Oxide of Zinc, pure Colors, with the proper Driers. — You can't buy better paint in the world than this. If we could make it any better we'd do it. We have been making this paint for thirty-six years and it's better now than it ever was. — It looks better and lasts longer than any paint you ever used. We put it up in full U. S. Government measure cans.

**"A SPECIAL PAINT FOR EVERY PAINTABLE SURFACE"**  
INSIDE OR OUTSIDE

Some dealer in your town keeps it—or write to us for color card and we'll tell you where you can get it.

**MINNESOTA LINSEED OIL PAINT CO.**  
THIRD ST. SOUTH MINNEAPOLIS, MINN.





We show this month our Plant No. 3 at Newark, N. J. It is one of our great system of factories, located at Cleveland, Chicago, Newark, Montreal and London, Eng.

## Sherwin-Williams Quality in Paints and Varnishes is not dependent upon outside sources or on the market price

of raw materials. We determine the right quality for best results in every product sold under the S-W. label—then adhere to it at all times. We are able to do this because we own and operate two large linseed oil mills, two dry color works (one of which is the largest in America), large zinc and lead mines, two smelting plants and many other facilities. These save us a great deal in cost of manufacture and distribution and enable us to maintain the highest quality at the lowest cost.

The full advantage of such quality is found in *THE SHERWIN-WILLIAMS PAINT, PREPARED (S. W. P.)* the best paint for buildings. Use it and you will become one of the great army of satisfied property owners.



### THE SHERWIN-WILLIAMS CO.

LARGEST PAINT AND VARNISH MAKERS IN THE WORLD

FACTORIES: CLEVELAND, CHICAGO, NEWARK, MONTREAL, LONDON, ENG.  
SALES OFFICES AND WAREHOUSES IN PRINCIPAL CITIES.



document published for political purposes to influence legislation rather than to educate the public. Honesty will help them, but not dishonesty.

#### THE ADVANTAGE OF FALL PAINTING

The falling leaves and decaying vegetation at this season of the year should do more than merely herald the approach of Winter. To the practical business man they should not only be a reminder that coal for the house, and heavy clothing for the body are necessary for comfort, but an overcoating of protective paint is a matter of vital necessity to metal work exposed day and night to the rain, ice and snow of the Winter months.

The surface of the earth is dotted with varied and costly building and bridge constructions of materials subject to rapid decay from the great heat of the sun, the moisture of rain and snow, and the destructive workings of the gases of combustion incident to manufacturing and transportation enterprises. Of the materials of construction, metal and wood deteriorate most rapidly, but their strength can be prolonged permanently by the application of a preservative consisting of nature's pigments and oils.

The weakening effect of rust on

steel work and metal surfaces is a source of expense and annoyance to those who do not practice thorough methods of protection. The rain and snow storms of Winter with their excess of

moisture, naturally result in the corrosion of metal surfaces on which the protective paint has peeled, blistered, cracked or weakened by long weather exposure or other rust-producing agen-

## THE ONLY BARN PAINT

bearing a formula label showing its composition and conforming in every detail to the laws of North Dakota.

PITKIN'S TRIPPLE CROWN BARN PAINT IS GUARANTEED TO WEAR 5 YEARS



The greatest part of the cost of painting is the labor necessary for applying. Therefore it is certainly economy to buy the paint which will wear the longest and at the same time give satisfaction.

Pitkin's is that paint. Pitkin has been making paint for 40 years and has a reputation for integrity and reliability that is in itself a guarantee of the goods.

Be sure to buy the right paint; not the cheapest paint.  
Send for a free sample.

**Geo. W. Pitkin Co.,**  
Paint and Color Makers,  
Benton Harbor, Mich.



cies. It is the heat of the Summer's sun that brings about most rapidly those changes which result in the loss of elasticity and protective power in paint coatings, exposing the metal surface to the moisture of Winter.

Paints applied in the Fall dry about as quickly as in the Summer, yet the complete oxidation of the upper portion of the film is not hastened as it is in the hotter days; therefore the original elasticity is maintained longer and the coating is much more durable. The clear, dry weather and absence of sudden showers during the Fall season, provide conditions most favorable for the proper application and drying of paints.

#### NEW WOOD PRESERVATIVE

Vice-Consul J. A. Van Hee, of Ghent, advises that recent experiments in Belgium made with a new coal-tar extract, known as injectol, have given satisfactory results, concerning which he writes:

The experiments were principally devoted to the treatment of wooden poles and blocks used in street paving. The product is a liquid, of a dark-brown color, very thin, and of regular density. Its degree of viscosity changes very little with atmospheric variations. One of the principal advantages is its penetration into certain woods without any pressure. For the antiseptic treatment of compact woods using the apparatus similar to the "Breant" system, the time necessary for the pressure and soaking into of a given quantity of injectol is considerably less than for any other antiseptic liquid, including creosote. As regards its antiseptic qualities, the following experiments and results obtained therefrom speak for themselves.

It has been found that where creosoted poles in the ground have only resisted decay for a few months, those treated with injectol remained unattacked after three years. Similar experiments were also made with railway sleepers; the latter were treated with different antiseptics. Some were soaked in a mixture of coal creosote, creosote and chloride of zinc, and two were treated with injectol. After having been left for a period of two years in a steeping vat composed of liquid manure and other miscellaneous decomposing substances it was found that the two treated with injectol were still in good condition while the others were almost completely destroyed. Similar results were obtained with wooden blocks for street paving. Other experiments are now being carried on and the results obtained will soon be made public.

## What Will It Do?

This is the question for you to ask when buying paint.

There are too many paints on the market that have no merits except that they sell at a low price or are made of S. P. Lead or Lead and Zinc.

What you want in paint is

- 1st.—DURABILITY
- 2nd.—COVERING CAPACITY
- 3rd.—APPEARANCE
- 4th.—COST PER YEAR TO PROPERLY PROTECT THE SURFACE

*The Heath & Milligan Paints*

possess the above qualities and insure BEST RESULTS

ASK OUR AGENT OR WRITE TO

*Heath & Milligan Mfg Co*

Paint and  
Color Makers



Chicago  
U. S. A.

## MASURY'S LIQUID COLORS ARE PURE

This  
On



Label  
Every

CAN

100 PER CENT DURABILITY.

MASURY'S PURE LIQUID HOUSE PAINTS

Offer for Durability and Economy.

THE STANDARD OF EXCELLENCE FOR SIXTY-FIVE YEARS

JOHN W. MASURY & SON, Manufacturers.

PAINTS, COLORS AND VARNISHES,

ST. LOUIS

CHICAGO

MINNEAPOLIS

NEW YORK

NORTHWESTERN BRANCH, 320-322 Second Ave. No., Minneapolis



## AT THE AGRICULTURAL COLLEGE.

### THE AGRICULTURAL CLUB AT THE A. C.

The North Dakota Agricultural College is justly proud of its literary societies because of their practical value in training their members. In them the sons and daughters of North Dakota have a better opportunity for developing their literary ability than in almost any other way.

North Dakota is primarily an agricultural state and it is therefore eminently fitting that among other literary societies a strong society in agricultural lines should be organized and permanently maintained. To this end the students of our college, interested in agricultural work, gathered together a few years ago

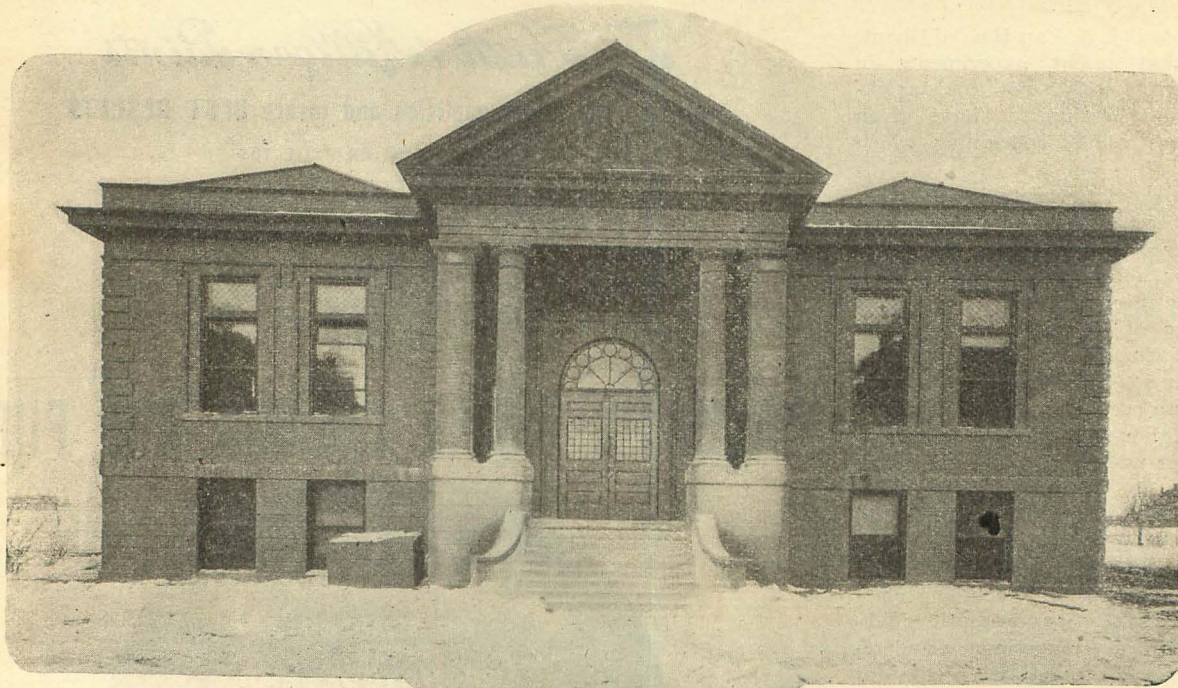
what extent the idea of older students giving place to new ones is carried, it might be mentioned that medals and silver cups are offered by the club each year to those among the younger students writing the best essay along purely agricultural lines and reading the same at one of our regular weekly meetings. In these contests only the younger students are allowed to compete as the Juniors and Seniors are debarred from entering the contest, but all classes take part in the regular meetings from week to week.

Besides these regular annual contests, extemporaneous debates are held and questions of vital importance are always discussed, questions for instance

ent agricultural papers handed out for examination after a discussion along newspaper lines has been carried on.

On special occasions different members of the faculty are invited to give lectures at the club and these talks are listened to very attentively. During the past winter Prof. J. H. Shepperd, Dean of the Agricultural Department, favored us with an interesting talk on crop rotation, illustrating his plans on the black board. Prof. Richard's address was on live stock question, while Mr. Tibert favored the boys with plans for building construction and the laying of durable cement floors.

As an evidence of growing popularity the time of holding these meetings has been extended from the three month's winter term to cover the full time during which the Farm Husbandry students



Carnegie Library at the Agricultural College.

and organized what is now known as the Agricultural Club. From a very small beginning it has steadily grown until it has reached the 300 mark in enrollment.

This society is extremely popular because of the practical nature of the work done by the young men. It might justly be said that the training offered in the Agricultural Club is an education in itself. In this club many young men get the foundation training and material which will fit them for leading public meetings and working on the farmers' institute platforms thruout the state.

It has been the policy of this society to welcome the new students and to favor them in every way possible so that they lose no time in getting the most good out of their college life. To show to

relating to the selection of seed grains and to the choice of the breeds of horses, cattle, sheep and swine best adapted to North Dakota conditions. Papers are prepared on the care and selection of stock, after the reading of which a general discussion follows much as is the case in farmers' institutes. The general subjects in Agriculture, Horticulture, Animal Husbandry and Dairying are constantly up for discussion. The students become much more interested in the different topics by preparing for discussion than they do when merely hearing them talked over with no opportunity to voice their ideas. The matter of the best agricultural newspapers and other literature is one of the subjects discussed. It is not uncommon to see samples of at least ten or twelve differ-

are in attendance at the college. The first meeting this fall will therefore be held about Oct. 15th and new students coming in are invited to meet with us from the first.

As a fitting climax, at the close of the year, before returning home, the Agricultural Club usually gives a banquet to its members. At the banquet last spring strong addresses were given by President Worst and members of the faculty, witty toasts were given by student members of the club and the music was furnished by the Agricultural Club Male Quartette.

All left the meeting feeling that they had spent a very profitable year and that the farm was after all the place to make a happy home.



## Shade Trees and Gardens.

C. B. Waldron, N. D. A. C., Editor.

Gentlemen:

I would like to get an answer to the following question in your paper:

There is something destroying my meadow by patches. There are small holes dug into the surface, about one and one-half inch wide and the same depth, as if dug by some small animals. And the sod from one-half to one inch deep with the exception of few roots of grass is loose as if cut under by some insects, and this can be scraped with the foot or taken and rolled up. I have hunted for insects, but can not find any. What do you think is doing this, and

these insects. The wire worm as perhaps you know, is the larval form of the small black beetle. In some part of the Red River Valley last spring the wire worm was very abundant and destructive. Some of the wheat fields within twenty miles of here were half destroyed while others were plowed up entirely. The same was also true of some corn fields.

The wire worm during the first season after hatching is very small and difficult to find. It always seems to have the habit of retreating deep into the soil at certain periods which makes the difficul-

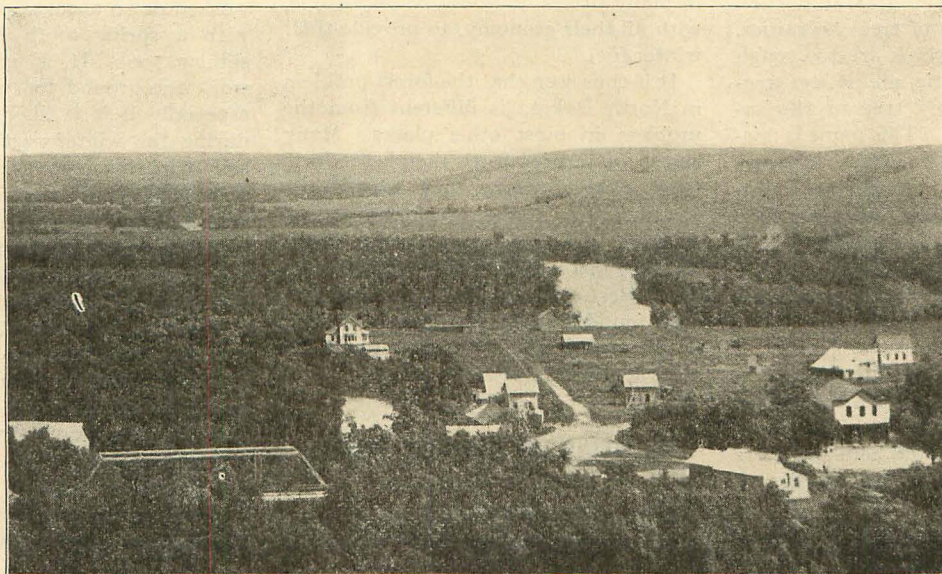
a profusion of attractive, waxy, white berries.

There is also another form, the *S. vulgaris*, known as Indian currant or coral berry. This is native of the western part of North Dakota, particularly in the Bad Lands where it makes a rather compact and attractive bush. The fruit of this one is bright red in color. The one that you sent is not ordinarily used for ornamental purposes as the others are much more attractive. In fact, the wolf berry is considered quite a pest in pastures and along road sides. Yours very truly,

C. B. Waldron.

### NORTH DAKOTA'S FOREST PROBLEM

The people of North Dakota have just laid the cornerstone of a fine building at Bottineau for the State Forestry



Natural Timber on the Sheyenne River

what can I do to prevent further damage?

John Johnson.

Edinburg, N. D.

Your letter to the North Dakota Farmer concerning damage to your meadow has been referred to me for reply.

It is impossible to assign any definite occasion for this damage from the data you are at present able to give. The holes that you speak of are undoubtedly caused by some animal. It is quite likely that these are made by some animal in search of insects for food. Skunks and badgers both feed upon grubs that work in the soil and these have ways of finding insects when we cannot readily do so. The destruction of the sod may have been caused by wire worms. I have seen large meadows in which the grass is entirely eaten off at the depth of one or so inches by

ty still greater. A very thorough examination of the soil to the depth of several inches may possibly reveal the presence of these insects. If it does not, I should have to have some further data before I could venture any guess as to the cause of the damage.

C. B. Waldron.

Mrs. H. L. House,  
Grandville, N. D.

Dear Madam:

The specimen of plant sent by you to the North Dakota Farmer is what is commonly known as wolf berry or buckbrush. It is known to botanists as *Symphoricarpos occidentalis*. This plant belongs to the honey-suckle family. It has no very marked medicinal or poisonous qualities that I know of. It is a near relative of the snow berry or wax berry, *S. Racemosus*. It is a very attractive and ornamental shrub, having

School for which they have been working for ten years. The need of encouraging forest growth was early recognized, for North Dakota is the most treeless of all the states.

Only one per cent of its area is timberland, and the best timber has been cut from much of this. Minnesota, on the other hand, its nearest neighbor on the east, has sixty per cent of its surface classed as timberland.

North Dakota has no National Forest. A few years ago the government undertook to establish one in the Turtle Mountains, and made a thorough investigation of the project only to discover that the effort was too late. The greater portion of the timberland of the proposed forest had already passed into private hands. It was not practicable to make a National Forest of the remaining and detached fragments, and the project was abandoned.



The Canadian Government was more prompt and successful. The Turtle Mountains extend across the international boundary, and the portion on the north side of the line was made into a Dominion Forest by Canada, and its timber is being cared for and developed, while that south of the line is practically all gone, except second growth which is rapidly being cut out.

The Turtle Mountains form the chief wooded region of the state. Early settlers on the open prairies obtained their fuel and lumber here and will continue to draw upon this little "North Woods" as long as the supply of material lasts. It is not an unusual thing for farmers to go fifty or sixty miles with their teams for wood, and for years the Turtle Mountains have met the demand, but they can not do so much longer.

Outside of this little area of woods and lakes North Dakota never had any considerable forests. The greater portion of the state consists of treeless prairies, while the portions which are too rough to be classed as prairie, are no less treeless. This is notably true of the so-called "Bad Lands." This name is misleading. The lands are cut by deep and formidable ravines, rendering road-making and traveling difficult; but much of the land is fertile and there is reason to believe that many valuable woods will flourish if planted and cared for.

Small patches of forest are found in many places in the state, furnishing evidence that trees will grow if they get a start. The valleys of most of the rivers have belts of timber, and here and there in the "Bad Lands" small bodies of timber are found.

The native trees are nearly all broad-leaved oaks, elm, poplar, birch, and occasionally maple. Coniferous trees are few and scattered. The pine forests which reached such high development in Minnesota, never gained a foothold west of the Red River. The broad and fertile valley of that stream appears not to have been favorable to the growth of pine. The soil is too rich and the tall grass furnished fuel for fierce prairie fires which also kept back the advance of the woods. Cedar is found in the western part of the state, but only in scattered patches.

Nature having done so little for North Dakota in the way of forests, and so much in the way of suitable soil and climate, it remains for the people to take the matter in hand and plant trees. They began doing this in a small way with the first settlements, and in recent years the state has assisted. It has planted trees, not only for experimental purposes, but also with a view to commercial use. The State Forestry Commission has now published its twelfth annual report—a fact which in itself

shows how early interest developed in this subject. Farmers have planted windbreaks to shelter their buildings and crops, and in many instances woodlots are growing to supply posts and fuel. Taken in all, an encouraging beginning in forestry has been made. Perhaps the most striking example of the need of wood is in the extreme northwestern part, in Williams and Ward counties, along the dividing plateau between the waters flowing to the Gulf of Mexico and those flowing to Hudson Bay. This region is almost treeless, but being fertile, it is rapidly filling with people. So scarce is wood, that the settlers have as nearly solved the problem of living without it as any farming people in the United States. They make use of the few willows along the water courses, and cut brush where they can find it, and not a chip or twig is wasted. Were it not that lignite is found in many places, it would be impossible, with all their economy, to provide their winter fuel.

It is thus seen that the forest problem in North Dakota is different from the problem in most other places. Many states are putting forth their best efforts to save what forests they have, while North Dakota, having so little to save is chiefly concerned in planting. Yet it is caring in a measure for what it already has. Best of all, it is laying a broad and sure foundation in its forestry school, where men will be trained to carry the work forward in years to come.

#### PREPARING THE VEGETABLE GARDEN

The advantages of fall plowing as compared with spring plowing are known to every farmer of the northwest. The yield of wheat and other grains is almost invariably greater when the soil is plowed and put into condition in the fall. The reasons for this are not hard to find. Plowing the soil in the fall allows the action of the frost to disintegrate the lumps and to settle the soil between the furrows so that we have a fine uniform seed bed. It is of even greater importance for the garden crops than for field crops as the success of the garden crop depends very largely upon the rapidity with which it grows. Unless one has a well prepared seed bed he cannot expect a rapid growth of his plants. Moreover, many of the garden crops in order to mature at the proper time should be seeded very early. The time of seeding can be hastened anywhere from one to three weeks by having the soil in condition for planting, the fall before. The rush of the work in the spring ordinarily prevents farmers from giving much attention to their gardens but with the soil all ready for seeding most men could afford the time to do at

least that much towards establishing a garden.

When it is considered that an acre devoted to garden crops produces something more than ten times the cash value of an acre devoted to farm crops, it will be seen that garden crops are really of great importance. The present high price of canned goods of all kinds and of food products generally makes it necessary for a man who has an eye to economy and at the same time who appreciates good living to devote a reasonable part of his energies towards supplying the table with fresh and palatable products from the garden.

It is our practice to cover the ground thoroly with about forty loads of well-rotted stable manure to an acre and plow this as early in the fall as possible tho even a late fall plowing is much better than spring plowing.

After plowing, the ground should be worked down to some extent, preferably with a spring tooth harrow or some similar tool. It is not advisable to work the ground too much in the fall especially if it is likely to be exposed during the winter as this may set the soil to drifting in the early spring. Other points that could be mentioned in favor of fall plowing are that it assists in destroying weeds and injurious insects.

Some successful gardeners even go so far as to seed some of their crops in the fall and we have tried this with marked success. Radishes and lettuce when seeded shallowly late in the fall on well-prepared ground will germinate very early in the spring and will develop considerably sooner than if seeded in the spring. This will be of special advantage where one wishes to obtain very early lettuce and radishes. Of course many of the crops like corn and beans cannot be seeded until the soil has become warmed up in the spring but they can be seeded considerably earlier on fall plowed land than upon spring plowed, since the upper layers of soil become warm first and in spring plowing the result is to plow under the warmer portion of the soil and expose the colder part.

During an experience of about twenty years in growing onions we find that one cannot expect a large crop unless the seeding is done very early in the spring. Onions that do not get a pretty good start early in May and are not well rooted and established before the warm weather of the early summer comes never make a very large crop. In fact, most all garden vegetables should be seeded early enough so that they can make a good growth during the month of May while the ground is yet mellow and moist from the action of the frost in winter. If seeding is done so late that they do not establish deep, well-developed root systems before the soil be-



comes dry and compact it is impossible to secure the best returns.

### THE TIMBER SUPPLY

Every person in the United States is using over six times as much wood as he would use if he were in Europe. The country as a whole consumes every year between three and four times more wood than all of the forests of the United States grow in the meantime. The average acre of forest lays up a store of only 10 cubic feet annually, whereas it ought to be laying up at least 30 cubic feet in order to furnish the products taken out of it. Since 1880 more than 700,000,000,000 feet of timber have been cut for lumber alone, including 80,000,000,000 feet of coniferous timber in excess of the total coniferous stumpage estimate of the Census in 1880.

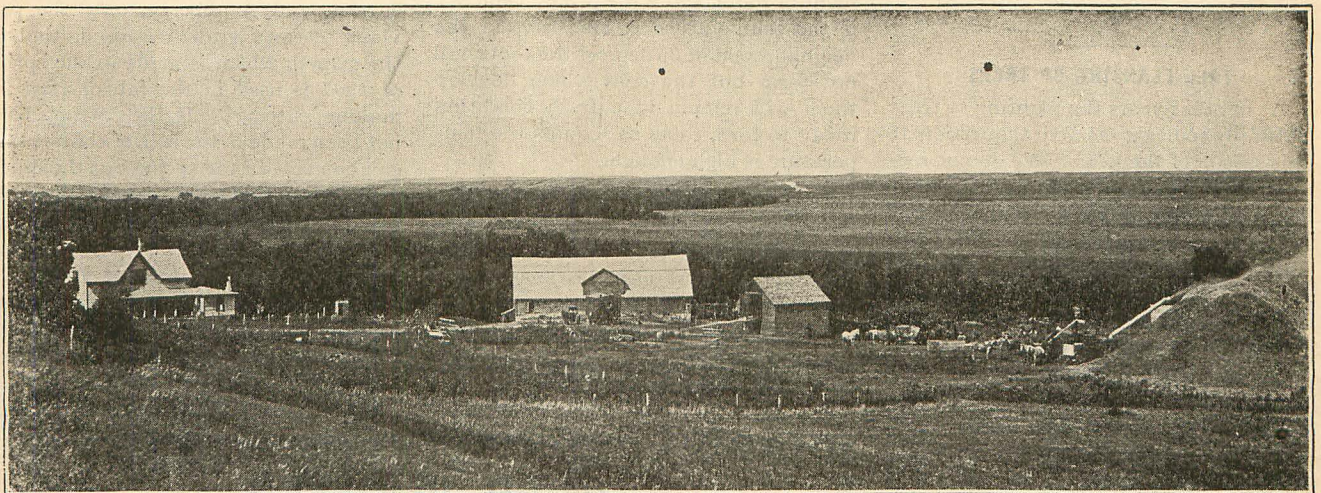
These are some of the remarkable statements made in Circular 97 of the Forest Service, which deals with the

forest resources is sufficiently accounted for by the increase of population, it is pointed out in the circular that the increase in population since 1880 is barely more than half the increase in lumber cut in the same period. Two areas supplying timber have already reached and passed their maximum production—the Northeastern States in 1870 and the Lake States in 1890. Today the Southern States, which cut yellow pine amounting to one-third the total annual lumber cut of the country, are undoubtedly near their maximum. The Pacific States will soon take the ascendancy.

At present but one-fifth of the total forest area of the United States is embraced in National Forests. The remaining four-fifths have already passed or are most likely to pass into private hands. The average age of the trees felled for lumber this year is not less than 150 years. In other words, if he is to secure a second crop of trees of the

across the tufted plain and laid foundation for the social excellence that is to be. This glorious plant, transmitted by the alchemy of God, sustains the warrior in battle, the poet in song and strengthens everywhere the thousand arms that work the purposes of life.

"Next in importance to the divine profusion of water, light and air, those three great physical facts which render existence possible, may be reckoned the universal beneficence of grass. Exaggerated by tropical heats and vapors to the gigantic cane congested with its saccharine secretion or dwarfed by polar rigors to the fibrous hair of Northern solitudes, embracing between the extremes the maize, with its resolute pennons, the rice plant of Southern swamps, the wheat, rye, barley, oats and other cereals, no less than the humbler verdure of the hillside, pasture and prairie in the temperate zone, grass is the most widely distributed of all vegetable beings and is at once the type of our life



Taking Advantage of Natural Timber Growth

timber supply of the United States and reviews the stumpage estimates made by all the important authorities. A study of the circular must lead directly to the conclusion that the rate at which forest products in the United States have been and are being consumed is far too lavish, and that only one result can follow unless steps are promptly taken to prevent waste in use and to increase the growth rate of every acre of forest in the United States. This result is a timber famine. This country is today in the same position with regard to forest resources as was Germany 150 years ago. During this period of 150 years such German States as Saxony and Prussia, particularly the latter, have applied a policy of government control and regulation which has immensely increased the productivity of their forests.

Lest it might be assumed that the rapid and gaining depletion of American

same size, the lumberman or private forest owner must wait, say, at least one hundred years for the second crop to grow. As a rule, such long-time investments as this waiting would involve do not commend themselves to business men who are accustomed to quick returns. But the States and the Nation can look much farther ahead. The larger, then, the area of National and State control over woodlands, the greater is the likelihood that the forests of the country will be kept permanently productive.—Department of Agriculture, Washington.

### INGALLS'S TRIBUTE TO GRASS

Senator Ingalls of Kansas once paid a tribute to the grass family, which we may all read with profit. He said:

"Majestic, fruitful, wondrous plant! The corn triumphant, that with the aid of man hath made victorious procession

and the emblem of mortality. Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than the minute tenants of the mimic wilderness, our earliest recollections are of grass, and when the fitful fever is ended and the forum wrangle of the market and the scar which our descent into the bosom of the earth has made, the carpet of the infant becomes the blanket of the dead.

"Grass is the forgiveness of nature, her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carage is forgotten. Streets abandoned by traffic become grass grown like rural lanes and obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality and



emerges upon the first solicitation of spring. Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements, which are its ministers and servants, it softens the rude outline of the world. Its tenacious fibers hold the earth in its place and prevents its soluble components from washing into the wasting sea. It invades the solitudes of the deserts, climbs the inaccessible slopes and forbidden pinnacles of mountains, modifies climates and determines the history, character and destiny of nations. Unobtrusive and patient, it has the field, it bides its time to return, and when vigilance has relaxed or dynasty has perished it silently resumes the throne from which it has been expelled, but which it never abrogates. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet should its harvest fail for a single year famine would depopulate the world."

#### FALL PLANTING OF TREES

As in other years the planting of trees naturally comes up as a vital question at this season of the year. We do not recommend a general planting of trees in the fall in North Dakota. If the ground is in excellent shape and one has first-class trees there is no objection to planting them provided they can be mulched and protected during the winter season but under ordinary circumstances it is better to trench in the trees during the winter, planting them early in the spring. This can be done quickly and easily by plowing out a deep dead furrow or trench, laying in the trees and covering them root and branch. They should also be covered with coarse straw.

Meanwhile the ground in which they are to be planted can be put into shape so that there will be no delay in planting when spring comes.

#### PREPARING OF CUTTINGS FOR SPRING PLANTING

We are often asked the question as to the best time of the season in which to make cuttings of currants, gooseberries, willows, etc. for spring planting.

There are two seasons of the year when these cuttings can properly be made. One is in the fall after the plants have fully matured and the other is in the early spring. The time of making these cuttings will depend upon the facilities which each man has. Generally speaking we prefer to make them in the fall. The twigs at that time are in the best possible condition. During the winter they are bound to dry out more or less and will not grow as readily as will the fall cuttings.

Cuttings of gooseberries and currants can be made at any time now but willows are ordinarily not mature enough until late in October. After the cuttings are made they are to be transferred to some place where they will not dry out. The ordinary practice of nurserymen is to cover them with damp sand and place them in cool cellars that are constructed for this purpose. The man who as not these facilities can either place them in the house cellar or bury them in the ground. There is no necessity of burying them below the frost line tho they should not be so situated that they will thaw and freeze nor where there is any possibility of their drying out. During the winter the cuttings develop callouses at the lower end. This means that there has been activity in the living cells between the bark and wood, known as cambium layer.

If the temperature of the place in which the cuttings are stored is too high this activity will result in the development of roots before the proper time but if the temperature is low, say, in the neighborhood of 35 degrees the roots will not form but the cells which develop them will remain in a fresh condition ready to form roots as soon as the temperature is high enough.

In the case of willow cuttings we have found it good practice to tie the cuttings in bundles of about 250 each, making the cuttings about ten inches long, taking care to have the tops of the cuttings all at the same end of the bundle. A trench is then dug to the depth of a foot or so when the bundles of cuttings are

placed with the top end down in the trench. This trench is then filled up with earth putting about two inches of earth over the bottom of the cuttings.

The whole is then covered over with straw or coarse strawy stable manure and left until spring. As soon as the weather begins to warm up in the spring the straw is removed from the trench giving the sun a chance at the soil which covers the base of the cuttings. The effect of the sun's heat at this time is to stimulate activity of the cells at the base of the cuttings and these soon develop into roots which may be seen pushing thru the bark. The cuttings can then be removed and placed where they are intended to grow.

In making the willow cuttings we find that we get the best results when the cuttings are not less than one-half inch in diameter and from there to one inch. The growth from these large cuttings is considerably more than from the younger and smaller twigs. With a plant of firm wood, however, like the currant and gooseberry, only the previous season's growth is used, that is, the growth which is made in the spring of 1907 is used in the fall of 1907 for making cuttings. If the cuttings have not been made in the fall, of course, they can be made in the spring but the difference being that they are not likely to start so soon as those that are cut the fall before. The reason for this is that the wood dries out more or less in the winter time and takes it longer to begin work in the spring. We can overcome this somewhat by soaking the cuttings for a few days before they are set.

## SEED WANTED.

We wish to buy Bromus, Timothy, Millet, Corn on Cob,  
Seed Grains, Etc.

FARGO SEED HOUSE, - - - Fargo, N. D.

## DON'T BE FOOLED

Into buying eastern and southern grown nursery stock that won't grow in the north.

### The Hankinson Nursery Company

Sell northern grown trees and guarantee them, replacing free. Write for price list. Grounds and packing house one and one-half miles west of town. Live agents wanted.

**Hankinson Nursery Company,**  
HANKINSON, - - - N. D.



**GOOSEBERRY AND CURRANT CUTTINGS**

Are the gooseberry and the currant bushes "running out?" They can be helped by severe pruning; but probably the best thing to do is to set new plants. Buy them from the nurseryman, "two year old bushes," at a good round price, which, if you are going to set out three or four long rows, will cost a small fortune? No, don't think of it. Stagger along with the old bushes for a couple or three years and by that time you can have a quarter of an acre of fine new plants at little or no expense. There is nothing more satisfactory nor easier than the reproducing of currants and gooseberries. And contrary to the general practice, now is the time to do it. If you have a parent stock, i. e. some old bushes of good varieties from which you can cut sprouts of this year's wood, or if you can get some cuttings from a neighbor's bushes, you can make a start on your new currant and gooseberry patch right now. The usual method recommended, aside from buying plants, is to make your cuttings shortly before frost and keep them over in sand in the cellar until spring. A good enough plan; but the following experience shows a better.

**Make Cuttings in August**

One August, about the third week, I was wheel-hoing thru the currant rows to cut out late weeds and prevent seeding, when the hoe broke off a vigorous, sappy currant shoot. Without expecting any particular results, I stuck it down about four inches in the earth between the bushes, setting my heel alongside to press it firm. I noticed it the following day; it was flat as a flounder. It happened that a good shower came along and some five or six days after the planting I was stonished to find my currant cutting growing apace. I immediately made a couple of dozen of cuttings each, of currants and gooseberries from the old bushes, taking the new, soft wood, and stuck them in moist, loamy soil, giving them one good watering. They rooted splendidly, put out new growth and hardened up before frost. They received several light hoeings. They showed a good half year's start over cuttings made later and planted in the spring. About 90 per cent of these August planted cuttings lived, which was slightly better than the record for the spring planted cuttings.

**Fixtures in the Garden**

Gooseberries and currants are two of the oldest standbys of the kitchen gar-

den; they are also highly profitable crops to raise for sale. I doubt if anyone ever heard of a "glut" of currants. The common, small red Dutch currant is the most widely grown, nevertheless there is no difficulty in raising Fay's Prolific or several other new varieties, which are good bearers and much larger than the red Dutch. In the gooseberries, the Downing (an improvement of the native American wild gooseberry) for a long time was the most generally grown, and possibly is today, as it has always proven resistant to the mildew. The large English gooseberries, however, are now coming into use. While they are subject to mildew, the use of fungicides has become so generally understood, that there is now little trouble in controlling the disease.

Both the gooseberry and the currant like a rich loam and no plants respond more generously to fertilization and good cultivation.

**To Kill the Fungus**

It is very well worth while to have some bushes of the big English gooseberries. They are enormous fruiterers, the berries almost as big as plums and of fine flavor; but as stated they are subject to mildew. For years this was considered a fatal defect; now it is recognized that all that is necessary is to give the bushes a spraying early in the spring and at intervals later until bearing time. The spraying solution which has given the best results during several years of comparative trial by the New York Experiment Station is "one ounce of potassium sulphide to two or three gallons of water." This has proven superior to the Bordeaux-soda mixture or copper carbonate solution. The mildew generally makes its appearance during May or early June and it is first noticed in glistening frosty spots on the young fruit and on the lower shaded parts of the bush. Later the spots enlarge and turn brown. If the attack is bad, it will affect the young twigs and may even destroy the bushes in a single year. As with all fungus diseases, the attack is always worse in a wet year than during a dry season. It should be remembered that spraying against fungus is always mainly preventive, and that treatment must commence early in the season, before the disease manifests itself.

**THE WEED PROBLEM**

It is a problem indeed. The weed is

the most expensive crop the farmer or gardener can grow. It takes up space, robs the soil of its fertility and divides with crops, if it does not monopolize them, the essentials of plant growth. It does these things, too, without any return for the mischief made, excepting the worry and trouble caused. But beyond this, the general effect of a rank growth of weeds is most depressing. It gives an unthrifty appearance and an untidiness to a place that always reflects on the owner, or occupant, whether justly or not, and is therefore, on general principles, a condition to be avoided, wherever possible. There are drawbacks, however, to a campaign against the weeds that have to be reckoned with. One person may do his utmost and his neighbor may neglect the duty. There may be vacant lands that are overgrown with the weeds. The highways may also be breeding places of the pests. The banks of irrigating canals and ditches may be overspread with them, as well as the rights of ways of railway companies and the like.

This suggests that one of the most important steps in the battle with the weeds is the co-operation of all having in charge the highways and public rights of way of every kind. It should be just as much the part of the road overseer's duty to keep the road free from troublesome weeds as to keep it passable and free from nuisances in other respects. The same is true of railway rights of way and of irrigation canals. There is no reason why they should be permitted to be a menace to public convenience and comfort.

This is a matter that needs more attention than it is receiving, because no matter how painstaking the farmer may be in his efforts to overcome the weeds he will be seriously handicapped if the highways, public lands and vacant places are allowed to be taken possession of by noxious growths to spread their seed far and wide. The weed problem is in fact an important one and cannot be solved by any one individual. As before stated it needs the cooperation of all, including the owners of city lots and acre tracts. Anti weed associations are badly needed and an agitation should be started that will cause a movement everywhere for the suppression of weed pests of every name and nature.—Gem State Rural.

**When Ordering Any Kind of Garden or Field Seeds Write to the  
"GRAND FORKS SEED CO.,"**

Handlers of only Northrup, King & Co.'s Sterling Seeds. We buy Timothy, Millet, Flax, Barley, Speltz and Wheat.



# North Dakota Farmer

## AND SANITARY HOME.

Entered as second class matter in the postoffice at  
Lisbon, North Dakota.

**PUBLISHED EVERY MONTH**

**E. F. LADD & CO., PUBLISHERS.**  
Lisbon and Fargo, N. D.

PROF. E. F. LADD, Editor, Fargo, N. D.

W. G. CROCKER, Lisbon, Business Manager.

### ASSOCIATE EDITORS

PROF. J. H. SHEPPERD, State Farm Notes.

PROF. W. B. RICHARDS, Livestock.

PROF. C. B. WALDRON, Fruits, Forestry, and In-  
sect Pests.

TERMS: One Year, 50 cents.

REMITTANCES should be made by Draft, Post-  
office Order or Express Order.

DISCONTINUANCES The magazine is sent until  
notice to discontinue is received, together with  
payment for all arrearages.

ALL ARTICLES AND EDITORIAL MATTER should  
be addressed to E. F. Ladd, Fargo, N. D.

Address all business to the Lisbon office.

ONE DOLLAR pays for three years' subscrip-  
tion, provided at least two of these are in advance.

**Vol. 9 OCTOBER, 1907 No. 4**

The wheat crop is something of a disappointment, the yield being in many cases only one-half what was expected earlier in the season. Does it not teach the same old lesson, diversify and not have your eggs all in one basket.

The farmer continues to pay the freight on "dockage" in his wheat and then allows the elevator men to cut it out and sell to their own advantage, and to the loss of the farmer. Why not keep this at home for the chickens and pigs?

North Dakota farmers need to learn that the only kind of agriculture which pays, in the long run, is crop rotation. Stock growing, a good bunch of pigs, a flock of hens and generally some attention to dairying. This means getting a part of the land in grass and the maintaining of the fertility of the land. The pig and the cow make good mortgage lifters, the hen supports the family and furnishes a regular supply of pin money.

Farmers say they can not readily change from wheat growing to other forms of farming. It doesn't cost much for half a dozen hens and they will multiply rapidly if well cared for. A pig will in a year bring, say, an increase of six to grow as marketable hogs. Besides, these eat products now going to waste and make a profit. It does not require skilled help for the care of these and it is a pleasure to watch them grow.

The writer saw recently a sample of wheat graded at the terminals as No. 3 Northern. It was in reality an ex-

ceptionally good No. 2, almost a No. 1, probably if it were cleaned it would go out from the elevators as No. 1 Northern.

The sample showed here and there a kernel of wheat that had been just slightly frosted, the flour producing quality of this sample had not in any way been injured, but it enabled the buyer to take advantage of the farmer who shipped the grain to market. How can this be remedied?

The time has come when our farmers must stand together in an organized effort to protect their own interests. Between the farmer and the consumer there has been built up a powerful organization which leech-like saps the life from agriculture and burdens the laborer with untold hardship. This paper has always stood for organization among farmers, and we still maintain that organization is all that can help the farmer. The great trouble is the promotor is trying to reap some advantage and to prevent the fullest success desirable.

Organize, stand together and push the Society of Equity in the right channel and success is sure to come to you. Keep free, however, from that element which would destroy your efforts.

Timber is coming to be the great need for this country. Good wood \$10 per cord, hard to be had at that price. Building material going up and no relief in sight. In fifty years North Dakota should be exporting lumber. Why not? The best investment any farmer can make for its future is to plant out 10 acres of good trees. Something to produce timber, fuel, fences, telephone poles railroad ties, etc.

The state pays you a good bounty for caring for the trees. Why not take advantage of it? With ten acres properly set out and cared for in ten years these would yield a good income that would continue for fifty years. The lot could be thinned in a few years and young trees sold at a good profit, and as they grew older new uses would be found for the timber such as fence posts, fuel, etc.

What a change would be made in the appearance of our state with ten acres in trees on every farm in the state! It would be the beauty spot of our country and the winds would no longer sweep across the land for their force would be broken and the climate tempered and fruits and berries would be grown in abundance. Such a condition is sure to come and the beginning is not far away.

Besides giving a bounty the state should tax every property owner in the state who failed to put out and care for a certain tract of trees in accordance with the land owned or occupied. Would this not be right?

## THE FARMER WITH THE BARLEY

Barley has passed the dollar mark, and the farmer who has a crop of barley the present year is exceptionally fortunate. The yield of barley is averaging more than twice that of wheat and with the price above \$1.00 it is bringing much of wealth to the North Dakota farmers. It is said that the enforcement of the Pure Food Law has had something to do with the increased price for barley.

Heretofore, barley has been used as one of the constituents of beer, malt, etc., but often glucose has been used to considerable extent to supplement the barley. Now that glucose or brewer's sugar cannot be used for this purpose the demand for barley will be much greater and the crop more profitable to the farmer. The barley of North Dakota is said to be of exceptionally good value for brewing purposes, and the farmers of the state will benefit by growing this crop to some extent in their system of crop rotation. Yielding, as it does, easily twice that of wheat and with a price fairly good, it should have a more prominent place than it has held during the past few years.

## THE WHEAT AND CORN CROP

The yield of winter wheat for 1906 was reported as 492,888,000 bushels. For the present year the United States Department of Agriculture has placed the estimate 409,500,000 bushels. For spring wheat the yield in 1906 was 242,372,966 bushels. The estimated yield for August by the Department of Agriculture, is placed at 227,000,000 bushels. It will thus be seen that there is a marked shortage in the wheat, both winter and spring and none too much was produced in 1906 to supply the demands, and unless there is an unusually large foreign production, the price is bound to increase. The estimated yield of corn for the present year, is placed at 2,500,000,000 bushels, while the yield for the last year was 2,927,000,000 bushels. The oat crop last year was 964,000,000 bushels, and the estimated yield for the present season is placed by the Department at 876,000,000 bushels.

## ALFALFA EXPERIMENTS

In bulletin No. 70 of the North Dakota Agricultural College is found much valuable information regarding alfalfa. Some of the general conclusions are as follows:

It is essential that alfalfa land be drained so as to be free from standing water, even for short periods, for such covering in the spring season seems fatal to the crop.

Several miscellaneous tests have also



been made with alfalfa. From trials conducted at this Station the following statements may be safely made: Alfalfa will do well in most parts of North Dakota when properly treated. Its value as a forage crop where it can be successfully grown needs no emphasis.

2. Alfalfa should always be seeded without a nurse crop.

3. The ground should be well prepared before seeding. Newly plowed ground should not be used.

4. Use only the best seed and sow from 15 to 20 pounds per acre.

5. Seed it in the spring about grain seeding time.

6. During the first year cut often to keep weeds down and prevent the leaves from rusting too badly. Cut it if the leaves turn yellow.

7. After the first year cut when about 5 per cent of the plants are in blossom. Only remove two crops in one year.

8. Do not cut or pasture late in the fall.

9. Manure is very beneficial at any time but more especially the first year when applied to the land before the alfalfa is sown.

10. Inoculation is sometimes necessary. Dirt from an old alfalfa field sowed or strewn upon the land is the best method of transferring the germs, but do not use soil from diseased ground. Manure reduces the necessity of inoculation.

11. The New York Station at Cornell has shown that the commercial cultures on the market at the present time are practically worthless.

12. Liming the soil is of no benefit to our trial grounds at Fargo.

13. When reasonably used alfalfa does not seem to deteriorate with age as may be noted from the five year yields recorded above for a single piece of land.

14. Good drainage, either natural or artificial, is essential for success with alfalfa.

#### EDUCATIONAL TENDENCIES

Now that a President Roosevelt has sounded a warning with regard to the trend of the educational tendencies of our time, perhaps the public will be awakened to the necessity of working certain reforms in our school system. President Roosevelt said: "Too often our present schools tend to put altogether too great a prominence on mere literary education, and, therefore, train away from the farm and shop. We should reverse this process."

This means then that the President is strongly in favor of industrial education; that he sees the need for introduction into our schools not only of manual training, but of agriculture; that he would have taught in our rural schools the elements of agriculture; and that he

would see established trade, industrial, manual training schools and high schools of agriculture throughout our land. Such a tendency would be only in keeping with what has made Germany the great industrial nation she now is. England has seen the need for such schools, and her ablest statesmen have been working to secure their introduction, and already many industrial schools are to be found throughout the country. In the United States we are just awakening to the necessity of training the hand as well as the brain.

Before a man can have leisure he must earn that which will support himself and those dependent upon him, and the training which he has received in the past has not always helped the laboring man. What is needed is a kind of education that shall enable a man to become skilled in some line of work, and, at the same time sufficiently well trained that he does not become narrow. The public school must cease to train all of its students as though they were to go on through the high school, the college and the university. Each is a unit by itself and should fit a man for something definite in life. Again 90% of the pupils never get beyond the common schools and it is here that they need help. Then the high school or technical school should fit the young man or woman for a plan of usefulness or for this college or may be necessary. The success that comes to our business colleges, schools of pharmacy and mining schools is because in each case they have trained for some specific purpose; and after all as we meet these men in life, do we find them, as a rule, less well educated than the average of those who have passed through the regular channels of school-life.

Nature-study was a step in the right direction; the introduction of agriculture into the schools, manual training, etc., is only giving what the pupil has a right to have in preparation for life's work. It is not necessarily adding new burdens; it means cutting out some of the things now in the schools. It means preparing text-books that are adapted to the kind of education that is needed. The arithmetic will deal with farm and industrial problems. The reader will have something of agricultural life, of mechanics and of industries. Those who live through another decade are bound to see great changes in our educational system, especially in the elementary schools.

#### THE HARVESTER TRUST

A great deal has been said and written about the "Harvester Trust". Some of which is true, some false, but that they are fast gaining control of the market and compelling all to bow to their dictates can not be denied. It is

never well for one great combination to destroy all strong competitors for trouble is sure to follow. One who thinks on these matters can but stop and ponder as to what the future offers. The editor of the American Cooperative Journal after visiting the great Iowa State Fair and looking at this class of exhibits comments thus:

There was, however, one exhibit that taught a lesson it was not there to teach, that left imprinted on the thinking mind an impression it was not intended to convey.

The magnificent exhibit of the International Harvester Company, comprising as it did almost every implement used by man, was an object lesson of modern trust methods, the intelligent observer will not soon forget.

Housed beneath that great canvas was everything a man might need in the implement line. There were automobiles and engines, harvesters and mowers, rakes, spreaders, shredders, wagons and countless other machines all controlled by one concern.

Some bore Deering labels, some had McCormick tags, some were made in Milwaukee, some in Ohio, some in Chicago. They represented the output of a score of factories gathered under one management for one purpose, to control the machine business, not only of the U. S., but of the entire world and grouped together on the fair grounds was an object lesson of their success. If they desired to show the farmer how completely they have succeeded they could have adopted no better way.

The admirer of the Deering machinery saw it housed under the same roof with McCormick and Osborne and Milwaukee outfits. No one bothered to explain the superior points of one or tell the weak points of the other, it mattered not which machine was sold and which remained. One dealer might buy a carload of McCormick binders, another a load of Deering's, still another a load of the Milwaukee, or the Osborne's, but the bills were figured by one man, the checks or notes made out to one concern.

No more abominable outrage was ever plotted against the grain growers of the world. While the honest bread growers of the grain belt states were tilling their farms, a crowd of men whose fortunes were made from those same tillers of the soil were deliberately organizing a monopoly to control the output of every implement factory of the United States, and now when they so nearly control them what have they done? Systematically raised the price of every implement they control and the farmer pays the bill.

Recently a move has been made to investigate its methods and we predict that if the curtain is rolled back from the scenes there will be presented an-



other view of modern industry no less nauseating than was the inner view of the meat trust and the grain combine.

And some day in the near future a man will demand that his state shall establish a plant for the manufacture of grain implements; when he does there will come the cry of socialist, anarchist, prison labor, the hired mouthpieces of this unholy combination will assail him from press and platform, but the farmer of the middle west will do well to listen and having listened ponder over the solution of one of the most vital questions today before the American people. It means more to the farmer than tariff schedules or foreign policies and they should demand that steps be taken to rid the country of the evil—give them what Texas did.

### FIGHT WITH THE GRAIN TRUST IN IOWA

North Dakota farmers who are battling to secure their just protection in the handling of grain, especially wheat will be interested in the fight being waged in Iowa at this time by the farmers against the so-called "grain trust." In the American Cooperative Journal for September appears a courageous attack upon present trust methods and we insert the following which will interest our readers.

"At one time one of the most powerful organizations of its kind on earth, arrogant, despotic, uncompromising in its dealings with the producers and cruel in its treatment of competition, it has finally been hunted to its lair, where, like the wounded stag at bay, it turns upon its pursuers and tormentors for the last, final struggle.

"Once it proudly and defiantly dictated the prices the farmer of the great northwest should receive for his grain. Once it laid its heavy hand hard upon the head of every producer and exacted its tribute. Once it controlled the selling price of grain so completely that the ambition of the farmer to realize a just and equitable profit on the product of his toil was, year after year, set at naught.

"In Iowa, especially, were its tentacles sunk deeply into the very vitals of the producer. He was at its mercy, if, indeed, it was possessed of one iota of mercy. Every bushel of grain must pay tribute to the gigantic grain trust, every town and village and hamlet felt the blighting hand of its "centralization." In conspired with railroads, it intrigued with politicians, it connived with terminal corporations, all to the mulcting of the producer and the extermination of legitimate competition. It controlled the common carriers, it bossed the terminal facilities and dic-

tated the action of the commission firms which sold the cereal products of the soil of the Hawkeye state. For years it dominated the buying and the selling of the farmer's grain and fattened upon the splendid profits it could and did force from all who came to barter with it. By the business methods of the grain trust individual effort was nullified and competition ruthlessly slaughtered. Private fortunes were swept away in many an Iowa town when the possessors of those fortunes had the temerity to meet the grain trust in competition. Grain elevators were closed and driven out of business, towns which boasted of splendid grain markets were reduced to the level of lonely "sidings" on the prairie and farmers were forced to take what the grain trust pleased to allow them for their gain and not what it was actually worth. Its chief aim seemed to be to give no quarter to competition of any kind, but to throttle it and exterminate it completely, and in this it was eminently successful.

"But its gluttony was its ultimate undoing. One by one, different communities began to quietly investigate matters and then to organize for mutual protection, in fact, for self-preservation. Co-operative grain companies were organized and a start made for freedom from the thralldom of the grain trust. Every reading, thinking man in Iowa knows what happened. Railroad companies either bluntly refused to grant sites for co-operative elevators or made matters so complicated and uncomfortable for those who asked for them that the little bands of men were almost discouraged. Appeals were made to the state railroad commission, which, as is usual with that body of public servants, took its own good time to grant relief or else utterly refused its assistance. But the courage of the men comprising the little bands of pioneers in the co-operative grain movement never faltered, never flinched for an instant. Doggedly they kept to their purpose, and, one by one, each was ultimately successful in securing a site and in securing facilities to haul its grain to market.

Once on the market with its grain the battle with the giant grain trust was renewed. Commission firms were warned not to "handle" the grain of the co-operative companies under pain of boycott and utter extermination. Threats were made that the handling of one bushel of grain from the co-operative companies meant war against the firm which dared to defy the grain trust, and war meant complete ruin for the firm. Fiercely the battle waged for months with little advantage on either side. The grain trust was strong, arrogant, confident. Reinforced with millions of dollars of capital, backed by the friend-

ship and assistance of the carriers, intrenched behind the Chicago board of trade and even, in most communities, aided by public sentiment, it was almost invincible. However, like the sturdy minute men of 1776, the farmers stood together, fighting bravely, stubbornly, for they realized that defeat meant commercial slavery, while victory meant independence and continued prosperity. With a loyalty that is found only in men of true heroic calibre, the farmers of the great northwest stood shoulder to shoulder, fighting their battle for commercial independence. Victory came to them slowly at first. Then victory followed victory so rapidly that, not only the grain trust, but the whole country stood aghast at the wonderful winnings of the co-operative companies in their gallant fight for life against the grain trust."

### Men Who Will Fight the Farmers

"The Iowa Grain Dealers' Association is composed, ostensibly, of about 300 gentlemen who own elevators, or elevators owned by men whose business is practically under the control of the men who own and control the great system of line elevators all over the northwest. These great elevator systems are owned and controlled by wealthy gentlemen of suave address, broad and expansive vest measurement and closely cropped mutton-chop whiskers, whose place of residence and voting precincts are in Chicago, Milwaukee, Minneapolis and other large cities, and who spend the major portion of their time in clubs and cafes, on yachts and in Europe. One of these gentlemen is known by the name of Armour, a name synonymous with pork the world over and he is at present building a \$2,000,000 summer residence on a 900-acre tract of the choicest land in Illinois, just a few miles north of Chicago. Mr. Armour is mentioned only incidentally in this connection, merely to illustrate what is being done with the money that has been wrung from the pockets of Iowa farmers by the carpet-bagging methods of those gentlemen in their grain operations of the past few years. They have successfully milked the farmers of Iowa of over a million dollars annually for the past ten years and with their plunder they are building palaces and living in oriental splendor and luxury. Like the "absentee" landlords of Ireland, they drain every cent possible out of the soil and put back nothing in return."

If you will favor us with a remittance for your subscription, either 50 cents for one year, or \$1.00 for three years, we will give you absolutely free a year's subscription to FARM & HOME, a semi-monthly farm paper of the highest grade. Do it now.



## Pure Food Department.

All Matters Pertaining to Foods will be Discussed in this Department

Many druggists are failing to comply with the requirements of the drug law regulating the sale of cocaine. They still continue to handle, and to put in stock, remedies containing the deadly cocaine. What physician ever prescribes any one of those patent medicines? If they handle such products it is for the purpose of selling direct to the consumer. When they are prosented they will undoubtedly cry persecution or beg ignorance. Both statements will be false. Cocaine is a curse and should be banished as far as possible.

If the introduction of bleaching, as has been claimed, has enabled the millers to produce a flour out of durum wheat equal to that produced from the old varieties, then why have they neglected to pay the farmer the same for this wheat as they do for the life and blue-stem. The men who put out this line of argument forgot to get in touch with the elevators and millers who are buying the wheat; and now let us take them at their word and assume, as many have maintained, that durum produces a good flour and then inquire why shall not the farmer be benefited as well as the miller.

It is a mistaken notion that the whiter the flour the better it is. This may be true where the flour is produced under natural conditions, but when the whiteness is produced by bleaching, it is not the quality of the flour that is improved, but simply its natural color has been removed and the buyer is misled.

The process of bleaching is at best a fraud, and the introduction of nitrous acid, nitrites, etc., into the flour is a dangerous process. It may be argued that they are present in only minute quantities, but this is no reason why they should be permitted; for, if in larger proportion they are injurious, then they are just as harmful in proportion to the amount present, even tho they be added in minute quantities.

Do not buy bleached flour; insist on having flour that has been in no way subject to chemical bleaching and be on the safe side.

### UNDRAWN COLD STORAGE POULTRY

The Department of Agriculture has noted the results of a Chicago cold storage investigation on the effects of storing undrawn chickens.

"Bacteria normally inhabiting the

intestinal tract" it is stated "are not destroyed by cold storage, neither are the eggs of the blowfly. These bacteria and maggots develop during the rise of temperature that takes place after removal from cold storage before they are killed by heat. The bacteria pass thru the walls of the intestines into the peritoneal cavity and liver, while the poisons formed by the bacteria are yet more penetrating and pass deeper into the muscles. These products of bacteria, called ptomaines, are poisonous. They are not destroyed by heat. In large amounts this ptomaine poison results in death. For it there is no known antidote." It is also stated that when chickens are kept for a long period undrawn, the fluid portion of the intestinal contents may pass into the adjacent flesh to the injury of the quality of the product. With freshly killed poultry the matter is very largely a question of the purchase of something which is valueless.

### ROTTEN AND STALE EGGS NOT FOOD

Why should the consuming public be longer imposed upon by allowing the sale of rotten and stale eggs as fresh and edible?

It is said that 70 per cent of the eggs sold in our large towns are unfit for food and that fully 50 per cent of them may be clearly classed as putrid. Must the public longer bear with this fraud?

Whose fault is it? Are the eggs stale from long keeping in cold storage and if so why should they be kept such length of time and why not a few fresh eggs? Attention is called to a clause in our food law which defines one form of adulteration as follows:

"It if consists wholly or in part of a diseased, decomposed, filthy or putrid animal or vegetable substance, or if such substance or substances be used in the preparation thereof, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter."

Does this not mean that such eggs as are now being handed out are in violation of our state and national food law?

If you will favor us with a remittance for your subscription, either 50 cents for one year, or \$1.00 for three years, we will give you absolutely free a year's subscription to FARM & HOME, a semi-monthly farm paper of the highest grade. Do it now.

## OUR FLOURS ARE

## Absolutely Pure and Wholesome

Ask Your Dealer For Either

"DIAMOND,"  
"OCCIDENT"  
or "BELLE."

Mills at Valley City, Jamestown, Grand Forks, Minot. Daily Capacity, 3500 Barrels.

Russell-Miller Milling Company.

## The Name

## "Nokomis"

On the label of any food product is an absolute

## Pure Food Guarantee

And it is also a guarantee that the product bearing the label has reached the highest degree of excellence in flavor and wholesomeness that it has been possible so far for any food product to reach.

*If your dealer does not handle Nokomis Canned Goods and Nokomis Coffee, send us his name and address and we will undertake to see that you are supplied.*

**STONE-ORDEAN-WELLS COMPANY,**

**Duluth, Minn.**



## Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade.  
ASK YOUR GROCER FOR THEM.

"BUY"

"EAT"

### HOME BRAND

Pure Food Products

"ECONOMY" "SATISFACTION"

Griggs, Cooper & Co.

MANUFACTURING  
WHOLESALE  
GROCERS,

ST. PAUL, MINN.

Main Offices:  
CORNER THIRD AND BROADWAY

**GRAND PRIZE**  
(The highest honor)

Awarded to

**DR. PRICE'S**  
DELICIOUS  
**Flavoring**  
**Extracts**

At the

ST. LOUIS  
EXPOSITION.

For sale by all representative grocers.

## MARQUETTE BRAND

Honest Value

At Honest Price

**MARQUETTE**

CANNED GOODS,  
MAPLE SYRUP,  
SPICES AND EXTRACTS,  
COFFEE.

PARK, GRANT & MORRIS,  
Fargo, N. D.

PARK, GRANT & MORRIS GROCERY CO.,  
Grand Forks, N. D.

WHOLESALE DISTRIBUTORS.

## RETAILERS PROTECTED

The National Food Law did not take effect until January 1st, 1907; and all goods on hand or receive by you prior to that time, are not affected in any manner by the National Food Law, and will not be, unless shipped from one state into another after the law goes into effect January 1st, 1907.

For your protection, it is necessary that you handle only pure goods, properly labeled within the meaning of this law and we, therefore, call your attention to the fact that food products sold to you by us are not adulterated or misbranded and are all guaranteed to conform to the requirements of all food laws, both State and National. This guarantee protects you from prosecutions under the National Food Law on any food products purchased from us hereafter.

REID, MURDOCH & Co.,

Chicago.

*Libby's*

**Food  
Products**

Canned Meats Pickles Olives  
Preserves etc.

Libby, McNeill & Libby.

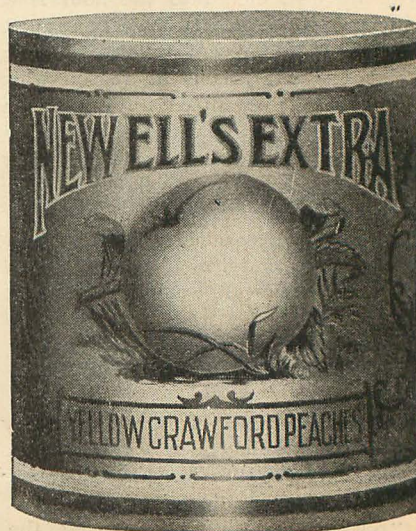
## NEWELL'S EXTRA LINE

Represents the highest quality of food products that can possibly be obtained. Purity and quantity always stand foremost.

Geo. R. Newell & Co.,

WHOLESALE GROCERS,

MINNEAPOLIS, - - - MINN.





## FALSE LABELING

Probably there is no commissioner in office who is not frequently beseeched by food manufacturers who desire his endorsement or sanction for a label which is entirely misleading and even false in the claims set up. Let me cite an instance:

Just recently there was submitted a label for "Combless Honey." It might better have been labeled "Honeyless Glucose," for this would have quite as accurately described its composition, and yet the producer could see no harm or injustice in the use of the label which he proposed to place upon such a product.

If left to the manufacturers how much pure currant jelly, strawberry preserves, etc., would the consumer be able to purchase in the average market? Judging from my observations in the Northwest it would be practically impossible to find a manufacturer whose strawberry preserves, jellies and jams were wholly as represented were it not for our food law. The majority of these products, altho bearing the label of strawberry or currant would be found to be composed largely of other fruit juices. In fact, in the majority of cases refuse apples constitute the bulk, and the strawberry or currant but a minor portion. The jams are all too frequently in large proportion the residue of the manufacture of jellies, and it is not a rare thing by any means to find canned or preserved raspberries and even strawberry preserves made from the dried, or desiccated fruits

## JELLIES

Many odd vessels can be utilized for jelly and the fact that it is so firm excludes its chance of spilling. A sugar bowl, a crock, that has been discarded because the top or handle

is broken, or a salve jar well washed, are convenient receptacles for jelly. If there are no tops for them saturate a piece of paper with alcohol or whiskey and place it on the top of the jelly; then cover the top with three or four layers of manilla paper and on top of this put one thickness of cloth. After tying this with cord, cut the irregular edges and the vessel will have a neat appearance. This same covering may be used for preserves and jams with safety.

A sample recipe for jelly of any fruit is as follows: After washing the fruit put it into a kettle with enough cold water to cover. Allow it to boil until the fruit is thoroly broken. Then pour into a muslin bag and let the juice drain off. To every pint of juice add one pound of sugar. It is best to let the sugar dry out in the oven for about an hour, but do not let it scorch. When the juice has come to a boil add the sugar and let it boil steadily until it jells—about one half an hour or more. To find out if it has jelled, put a tespoonful of the syrup in a saucer and set it aside to cool.

## Currant Jelly without Boiling

Pick the currants from the stem and after washing them take to each pound of currants one pound of sugar.

Squeeze the juice from the currants thru a flannel bag, and then very slowly stir it into the sugar until it thoroly jells. This will make a clear jelly which will keep perfectly.—Jewel Bulletin.

## CORN AS HUMAN FOOD

Maize, or Indian corn, is one of the most important cereal foods we have, says the Farmers and Drovers Journal, considered from the standpoint of palatability, nutritive value and digestibility. This is in accordance with a recent bulletin from the United States Department of Agriculture. There are so many ways in which corn can be used as food the wonder is that it is not more largely used than it is. In days gone by corn bread and mush and milk were a regular part of the diet of country people, but they are used less frequently these days. Now corn is used as breakfast foods of various makes and brands. Where is there a person who does not like roasting ears? Eaten from the cob with salt and butter there is nothing better. Then there are puddings made from cornstarch, and glucose and corn oil have great commercial value.

There is no other crop raised upon the farm that has so many uses as corn. It

## HONEY

## FINEST QUALITY CLOVER HONEY.

In 30-lb. cans, one can 10 cts. per lb; 2 or more cans 9½ cts. per lb; 12-lb cans, in cases of 72 bs. 9½ cts. per lb. Amber Honey and Buckwheat Honey, ½ cent per lb. less than Clover. Address, M. V. FACEY, PRESTON, FILLMORE CO., MINN.

YERXA

FARGO, N. D.

"The Cash Grocer"

We buy in large quantities, for cash only, for our various stores and can save you money.

Big Store

Big Stock

Big Sales

Small Profits

Cash

In the pantry, they're like money in the bank---  
ready for all emergencies.

ARMOUR'S TRADE *Veribest* MARK MEATS.

Packed in Air-Tight Tins.

"U. S. Inspected" purity plus ARMOUR quality.



can truly be called the king of all crops.

There are doubtless many of our older readers who will recall the days when they used to select out a bushel or so of corn as soon as the crop was harvested in the fall and put it by the kitchen stove to dry for grinding into meal. Of course there was always old corn for meal, but it did not taste as good as the new. As soon as the new corn was dried enough it was shelled and taken to the mill and ground, and that night there was mush and milk for supper, and perhaps fried mush for breakfast the next morning and corn bread for dinner. Wonder why people nowadays don't eat corn bread as they used to?

#### THE WHY OF "PATENT MEDICINE" HABIT

Why do people take patent medicines? That's easy. Because they don't know any better. But that is no real answer to so serious an evil. Let us consider the matter in detail. If we can discover the reason for this insidious vice it will go far toward indicating the cure for it.

First of all people take patent medicines because they feel bad. They are not well, and they know it. They have tried a doctor, another doctor, and another and another; and still they are no better. They have seen glowing accounts of the miraculous curative effects of Peruna, Paine's Celery Compound or some other nostrum; and, usually as a last resort, they buy a bottle and take some. Immediately they feel better. Then, as I have said, they recommend it to their friends; and so the good (?) work goes on.

But to feel better is not to be better. It is the easiest thing in the world to control sensations by means of drugs. I can think of twenty drugs a few doses of which will make a weakling feel like a giant, actually "like another man." I could mention an equal number a small quantity of which would make the strongest man as weak as an infant. Every doctor carries in his hypodermic case drugs which properly applied will, in every case, relieve pain and procure sleep—or, if not sleep, something which, at least, resembles sleep very closely.

#### Worse Off, Feels Better.

But to feel better is not necessarily to be better. To stop the pain is not to control the actual disorder of which the pain is merely an indication. The insensibility procured by drugs is no

If you will favor us with a remittance for your subscription, either 50 cents for one year, or \$1.00 for three years, we will give you absolutely free a year's subscription to **FARM & HOME**, a semi-monthly farm paper of the highest grade. Do it now.

more sleep than the insensibility induced by the vigorous application of the policeman's club is sleep. In fact, the latter is by all means the safer method.

But the poor wretch who suffers intense pain or who cannot sleep wants relief. The patent medicine promises it—and often, temporarily of course, gives it. So he turns to the patent medicine.

#### "People Like to be Humbugged."

As that enterprising showman, P. T. Barnum, said: "The people like to be humbugged"—if, it may be added, it be done skillfully. And the patent medicine men do it skillfully; for in the art of humbugging the public with ease, grace and dispatch they are past masters.

There is no doubt but that another cause of the patent medicine evil is the fact that in many parts of the country, especially in the rural districts, the majority of the doctors are neither as efficient or as careful as they might be. Thus the sufferer after receiving no benefit from their treatment turns to the patent medicine.

#### And What is the Remedy?

And how shall we conquer this hydra-headed dragon? Emerson once said: "Some day we shall learn to supersede politics by education." And in pointing out a cure for the nostrum menace, I would say: Some day we shall all possess a general knowledge of our bodies; and then the patent medicine business will die a natural death. We shall learn to supersede drug taking—probably all drug taking—by education.

A little honest, logical thinking, honestly and logically applied would promptly eradicate most, if not all, of the miseries of life. And a very little logical thinking would convince any man or woman that physical derangement or discomfort of any kind must arise from a cause, that to relieve the discomfort the only thing necessary is to remove the cause.

#### Trying to Scrape the Shadow Off

What would we say if we saw a man under a tree trying to scrape the dark shadow off the ground. We would, to express it mildly, have serious misgivings concerning his sanity. We would advise him, if he wanted more sunlight, to cut down the tree. But the people who take patent medicines, indeed all people, both lay and professional, who hope for a cure of any disease by drugging, are quite as illogical, quite as insane. They overlook the cause, and make efforts, necessarily futile, to remove the effect. Some day we shall learn to supersede by education not only politics but many other stupendous evils, not the least among them the patent medicine habit.

#### FARGO MILLING CO.

Fargo, N. D.

Pays the highest market  
price for wheat.

#### WE MAKE CANDIES

Of Merit and Quality.

CONGRESS CANDY CO.,

GRAND FORKS, N. D.

#### "Everhart's

Candies are

PURE."

WRITE FOR OUR

Pure Food Grocery Catalog.

FARMERS' SUPPLY HOUSE,

Fargo, - - - North Dakota

**60  
CUPS FOR  
- 15 CENTS -**



**MEAD'S CEREAL BLEND**

**LOOKS LIKE COFFEE } BUT  
TASTES LIKE COFFEE } IS NOT  
SMELLS LIKE COFFEE } COFFEE.**

Is a Scientific blend of the Choicest Rye Wheat and Barley Grown, no hulls, chicory or dope in it. Aids digestion and cures dyspepsia. Costs 3/4 less than Mocha & Java—is 20 times better. A pound package post paid on receipt of 25 cents. Write for our three special offers. Ask your grocer for it first.

**MINNEAPOLIS CEREAL CO.,**  
Coffee Dept. Minneapolis, Minn.  
Agents wanted everywhere. U. S. SERIAL 712



# Home Affairs

Katherine C. Neilson, Editor

(We have seriously felt the need for giving more attention to home affairs in the columns of the North Dakota Farmer. Arrangements are now made whereby Mrs. Neilson will devote some time and thought to building up this department and I trust our readers will aid her by furnishing timely topics of interest to our readers. It will be the aim to make knowledge helpful and let the brains help the hand, and so adopt the simpler methods that will afford the greatest good.—Editor.)

Domestic Science, Household Economics or Observations, Experiments and New Discoveries., which shall we call this department?

The last three names will be more appropriate since we have to study the climatic conditions of home life and its adaptability. The scarcity of fruits and the prices of goods from other markets.

In early days the new settlers were patrons of very inferior goods—shoddy clothing and dried fruits of the mummy type. The general stores in the far off new country (called department stores in cities) kept a variety of necessities from cambric needles to a bbl. of pork, but the greatest commodity was hope and a good appetite for this variety of retailed "grub" as the crews on bonanza farms termed it.

Times have grown better, the cultivation of small fruits is as flourishing as small grains and small children. The seasons favor a diversified diet. At present, cool evenings welcome to the hungry men warm and nutritious soups with the solid and hearty meats and vegetables, and warm drinks.

The busy house-wife this month is looking about for something to pickle and a scarcity of material puzzles us. We will consider our needs, since our order man or grocery, informs us, all fruits will be very scarce. "You will be fortunate if you get dried apples and prunes at reasonable prices."

As for pickles—we have but little to do with—if you cannot get all you need of small cucumbers to salt or make up now, take the medium sizes and slice. Chop the large ones with onions and make as you would green tomatoes for pickle-lily.

Mustard pickles can be made with cucumbers, onions, califlower or sliced cabbage.

Pumpkins make the finest of mar-

malade, pie-plant will make another variety. Cranberries and apples, half and half make jelly equal to currants. Beets with spiced vinegar make pickles of a fine flavor.

A few formulas may be convenient now:

## Pickles

Sliced Cucumber Pickles: Do not pare them. Take the medium sizes, slice as for the table, sprinkle with salt and let remain for 24 hours—drain and rinse and get quite dry, pack in quart glass cans—to every quart add one table spoon of ground mustard and one-half table spoon of ground white or black pepper, a little sliced onion, a little alum dissolved if you wish. Pour over cold vinegar and seal, do not use for a month. One-half cup of olive oil improves them.

Ripe Tomato Pickles—not pared. One peck nearly ripe tomatoes cut in two, drain, while the vinegar is boiling with sugar, place the tomato slices in glass cans, sprinkle with the pickle spices (so convenient and of a variety of whole spices) when the vinegar is cold pour it over the tomatoes and seal, they will be ready in a month or six weeks. All cold vinegar pickling has to stand long before using. These are exceptionally

fine. Use sparingly of the spices as they are strong.

Beet Pickles to Can. (Cooked beets). Boil the vinegar as for sweet pickles unless the beets are very sweet. Sprinkle the spices over the vegetable in the can or boil in the vinegar—seal while hot.

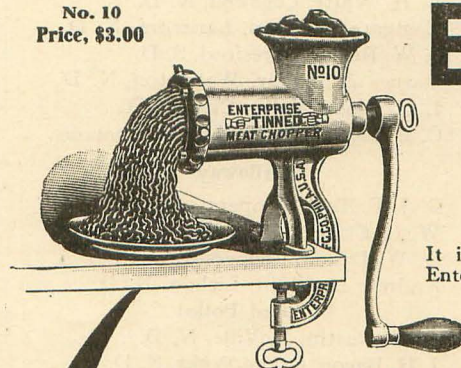
Pumpkin Marmalade. Pare and cut into dice the strips of pumpkin to fill a large milk pan. Slice two lemons with the rind, add ginger root or pulverized ginger to taste, add two pints or more of sugar and about the same of cold water, let stand over night, put into an enameled kettle and cook for several hours. You can add more sugar and lemon, if desired, but cook until it becomes clear and the syrup is thick like all marmalades—put into tumblers or glass cans. Pour paraffin over when cooled.

Nut Marmalade. 4 pounds of chopped pie-plant, 6 pounds of white sugar, 1 pound chopped almonds, 4 lemons (cut fine.) Do not peel the lemons or blanch the almonds. Add 1 cup of water and boil over an hour, if you add a few drops of almond extract it is improved. This is put into glass tumblers and sealed with paraffin. (Not to be excelled.)

These are all tested recipes. November will have its seasonable rules. Any questions will be cheerfully answered, and suggestions appreciated.

If you will favor us with a remittance for your subscription, either 50 cents for one year, or \$1.00 for three years, we will give you absolutely free a year's subscription to FARM & HOME, a semi-monthly farm paper of the highest grade. Do it now.

No. 10  
Price, \$3.00



## ENTERPRISE Meat and Food CHOPPER

It is really better to own an Enterprise Meat Chopper and cut your sausage meat easily, quickly and well, than to trust to a borrowed machine to "grind" it. The

### Better To Own Than to Borrow

No. 5 Enterprise Chopper costs only \$2. No. 10, shown in cut, \$3. They are standard family sizes, and not only save half the work at butchering time, but are useful in the kitchen every day in the year. Enterprise Meat Choppers cut the meat with a revolving steel knife against a perforated steel cutting plate without crushing, and make tough meat tender. Easily cleaned, practically unbreakable, and will last for years. Made in 35 sizes and styles for Hand, Steam and Electric Power. We also make cheaper Food Choppers, but recommend the above for the reasons given. Illustrated Catalogue free.

The Enterprise Sausage Stuffer is another indispensable machine when making sausage. It is also a perfect Lard and Fruit Press. Be sure the name "Enterprise" is on the machine you buy. Can be had at Hardware and General Stores, etc. Write for the "Enterprising Housekeeper," a book of 200 choice recipes and kitchen helps. Sent free.

THE ENTERPRISE MFG. CO. of PA. 241 Dauphin St., Philadelphia, Pa.



# Northwestern Breeders' Directory.

## HORSES

McLaughlin Brothers, St. Paul, Minn.,  
Importers of Percheron and French  
Coach Stallions.

### Percheron

T. H. Canfield, Lake Park, Minn.  
Stern Brothers, Fargo, N. D.  
Crandal & Danforth, Randolph, Minn.  
James Austin, Hannah, N. D.  
Champlin Brothers, Clinton, Iowa.  
W. G. Clark, Gladstone, N. D.  
Jesse Sullivan, Lisbon, N. D.  
O. O. Ellison, (Sons), LaMoure, N. D.  
White Bros., Valley City, N. D.  
H. G. McMillan, Rock Rapids, Iowa.  
A. H. Brett, Mason City, Iowa.  
F. G. Wentworth, Lake City, Minn.  
Donald Campbell, Hannaford, N. D.  
J. A. Englund, Kenmare, N. D.

### Clydesdale

Donald Campbell, Hannaford, N. D.  
McLay Brothers, Janesville, Wis.  
Alex Galbraith & Son, Janesville, Wis.  
John Hay, Hannah, N. D.  
George Lang, Mapleton, Minn.  
A. J. McInnes, Dazey, N. D.  
W. T. McConnell, Hannah, N. D.

### Belgians

Dunham & Fletcher, Wayne, Ill.  
Singmaster Brothers, Keota, Iowa.  
J. Crouch & Sons, LaFayette, Ind.  
Robert Burgess & Son, Wenona, Ill.  
Oltmanns Brothers, Watseka, Ill.  
J. W. & F. L. Peterson, Litchfield, Minn.  
Barnes & Shaffer, Wahpeton, N. D.

## CATTLE

### Shorthorn

James Austin, Hannah, N. D.  
W. W. Brown, Amenias, N. D.  
Winn Brothers, Redwood Falls, Minn.  
Sanders Brothers, Farmington, Minn.  
E. C. Butler, Cooperstown, N. D.  
J. W. Crawford, Wahpeton, N. D.  
F. W. Harding, Waukesha, Wis.  
F. J. Dickerson, Medford, N. D.  
James O'Hara, Lanesboro, Minn.  
D. J. McLean, Cokato, Minn.  
John Donnelly, Grafton, N. D.  
N. P. Clarke, St. Cloud, Minn.  
S. Fletcher, Matteson, N. D.  
A. C. Gallup, Fairmount, N. D.  
Frank Hammond, Bismarck, N. D.  
S. G. Eliason, Montevideo, Minn.  
Thomas Hecker, Carrington, N. D.  
H. A. Nelson, Ray, N. D.  
M. D. Kiser, Rogers, N. D.  
Wm. Laplant, Jessie, N. D.  
Stern Brothers, Fargo, N. D.  
C. H. Ferrier, Dover, Minn.  
Andrew Laughlin, Lisbon, N. D.  
J. S. Anderson, Atwater, Minn.  
D. W. McCanna, Cando, N. D.  
A. K. DeJong, Marion Junction, S. D.  
Barnes & Shaffer, Wahpeton, N. D.

T. H. Canfield, Lake Park, Minn.  
J. S. Peterson, Crete, N. D.  
J. B. Powers, Power, N. D.  
Luke Stannard, Taylor's Falls, Minn.  
H. A. Strutz, Holmes, N. D.  
W. J. Turnbull, Harwood, N. D.  
Finlay McMartin, Claremont, Minn.  
John B. Armstrong, Hannaford, N. D.

### Hereford

J. H. Witcher, Valley City, N. D.  
Jeremiah Growley, Broncho, N. D.  
Cargill & Price, LaCrosse, Wis.  
R. W. Dickey, Ellendale, N. D.  
H. F. Eaton, Oakes, N. D.  
Massingham & Cosgrove, Harmon, N. D.  
A. Edmunds, Caledonia, N. D.  
A. J. McInnes, Dazey, N. D.  
F. B. & H. W. Gannon, Ellendale, N. D.  
R. A. Hasse, Tappen, N. D.  
H. Jacobsen, Fingal, N. D.  
H. J. Johnson, Oakes, N. D.  
Movius Brothers, Lidgerwood, N. D.  
J. C. Mills, Hannaford, N. D.  
W. L. Richards, Dickinson, N. D.  
Roach, Wold & Keck, Rutland, N. D.  
Whitcher Brothers, Valley City, N. D.  
E. O. Tade, Wheelock, N. D.

### Aberdeen-Angus

R. A. Candor, Cogswell, N. D.  
O. S. Chase, Mott, N. D.  
G. W. Foogman, Grafton, N. D.  
Geo. L. Lillie, Sergius, N. D.  
Geo. A. McFarland, Valley City, N. D.  
M. F. Merchant, Ellendale, N. D.  
Frank Sanford, Valley City, N. D.  
Stern Brothers, Fargo, N. D.  
N. Upham, Grafton, N. D.  
L. H. White, Cogswell, N. D.  
Eastgate Brothers, Larimore, N. D.  
J. W. Reedy, Beresford, S. D.  
Barnes & Shaffer, Wahpeton, N. D.  
L. A. Wood, Valley City, N. D.  
C. M. Perry, Aldrich Av., Minneapolis.

### Galloway

G. J. F. Teal, Cooperstown, N. D.  
W. C. Clark, Gladstone, N. D.  
G. W. Dycon, Cooperstown, N. D.  
Andrew Laughlin, Lisbon, N. D.

### Red Polled

O. A. Austin, McVillie, N. D.  
J. H. Bacon, Grand Forks, N. D.  
J. W. Martin, Gotham, Wis.  
J. A. England, Kenmare, N. D.  
C. G. Fait & Son, Monango, N. D.  
A. H. Laughlin, Lisbon, N. D.  
R. E. McHugh, Dresden, N. D.  
J. W. Mitchell, Wheatland, N. D.  
H. M. Tucker Courtney, N. D.  
C. A. Hall, Cooperstown, N. D.

### Jerseys

J. H. Bosard, Grand Forks, N. D.  
J. A. Colby, Gardner, N. D.  
Rev. S. Currie, Park River, N. D.  
J. P. Ebersole, Upham, N. D.  
M. N. Johnson, Petersburg, N. D.

## SWINE

### Poland China

C. F. Gummert, Renville, Minn.  
Geo. H. Smith, Amenias, N. D.  
O. R. Aney, Wilmot, S. D.  
W. W. Brown, Amenias, N. D.  
E. C. Butler, Cooperstown, N. D.  
Winn Brothers, Redwood Falls, Minn.  
John Donnelly, Grafton, N. D.  
S. Fletcher, Matteson, N. D.  
O. S. Jones & Co., Madison, S. D.  
L. A. Knoke, Willow City, N. D.  
Axel W. Peterson, White Rock, S. D.  
A. S. Hawkes, Waseca, Minn.  
E. H. Schutt, Fairmount, N. D.  
E. J. Cowles, West Concord, Minn.  
J. A. Englund, Kenmare, N. D.  
J. L. South, Casselton, N. D.  
C. E. Stowers, Wheatland, N. D.  
Herbert Willard, Glyndon, Minn.  
J. K. Campbell, Slayton, Minn.  
John DeVaney, Waverly, Minn.  
H. H. Bonniwell, Hutchinson, Minn.

### Berkshires

J. H. Bosard, Grand Forks, N. D.  
W. S. Corsa, White Hall, Ill.  
J. O. Hertsgaard, Kindred, N. D.  
John Stafford, Crystal, N. D.

### Yorkshires

T. H. Canfield, Lake Park, Minn.  
Frank Willis, Marletta, Minn.  
G. A. Forgeron, Rosemount, Minn.

### Duroc-Jersey

Fargo Edgewood, Fargo, N. D.  
W. E. Olive, Worthington, Minn.  
Riverview Farm, Mandan, N. D.  
L. L. Butler, Webster, S. D.  
E. W. Smith, Buffalo, N. D.  
J. E. Sparks, Jr., Armour, S. D.  
L. H. White, Cogswell, N. D.  
A. K. DeJong, Marion Junction, S. D.  
S. O. Mason, Red Wood Falls, Minn.

### Chester White

James Austin, Hannah, N. D.  
P. M. Burke, Crystal, N. D.  
C. E. Budlong, Albert Lea, Minn.  
C. A. Gallup, Fairmount, N. D.  
A. E. Thompson, Hannah, N. D.  
L. C. & V. A. Hodgson, Luverne, Minn.  
James Fisher, Eastman, Wis.

## SHEEP

### Oxford Down

J. C. Mills, Preston, Minn.  
Eastgate Brothers, Larimore, N. D.

### Shropshire

C. E. Stowers, Wheatland, N. D.  
Chandler Brothers, Kellerton, Iowa.  
Geo. H. Smith, Amenias, N. D.  
Geo. McDerrrow & Sons, Pewaukee, Wis.

## POULTRY BREEDERS

### White Plymouth Rocks

J. A. Englund, Kenmare, N. D.  
Eastgate Brothers, Larimore, N. D.



## Live Stock Department

PROF. W. B. RICHARDS, Editor

### A WARNING TO THE FARMERS OF NORTH DAKOTA NOT TO SACRIFICE THEIR LIVE STOCK

I think a note of warning to the farmers of the state would not be out of place, but opportune at this time. I predict that the live stock industry of the state is going to experience this year one of the greatest blows it has ever experienced; because of the high price of grains at the present time. In fact, there is sufficient evidence to show that it has begun to suffer judging from the class of stock that is being marketed. Technically speaking it is not marketing that is going on, but a dumping process. Immature, unfinished pigs, breeding pigs, such as sows, young cattle of all descriptions, half fat cattle and breeding females, the source of next year's supply are being sold at any price they will bring. This is not the first occurrence that is recorded of similar action on the part of the farmers of this state or of other states. In justice to the farmer or feeder, I will admit there are times when it is a risky proposition to fully fit stock for market because of the prohibitive price of grain. The point I wish to make, however, is that we too often expect the grain fed to live stock to net as much available cash as when sold at the elevator; we do not stop and credit the value of the fertilizer the grain produces when fed to animals upon the farms, which will ultimately return a cash value. Every man who owns land should keep this in mind regardless of the fact whether he will farm the piece of land long enough to reap the return from the manure he has placed on the land, but he owes it to those who succeed him in possession of the land, whether it is his children that are to occupy it, or another citizen, if he has any regards for the rights of others. "There is only one crop of land," and we must preserve its usefulness so that it will be able to continue producing crops to feed future generations.

It is a fact that the present price of most of the grains is practically prohibitive for feeding to certain animals if one had to buy them to feed. It is a different proposition somewhat providing the farmer has raised the stock that he is to feed. In that event he can better afford to do it, and must of necessity do it in order to get paid for raising them. I would not advise any one to feed pigs this fall very long and attempt to get them very heavy before selling. This is a mistake that is often made even

when feed is cheap. The market prefers a pig weighing about 250 pounds. Experimental work has proven that it takes more feed for a pound of gain the older and fatter the animal becomes, this being a point quite generally known and observed among practical farmers and feeders finishing animals for market.

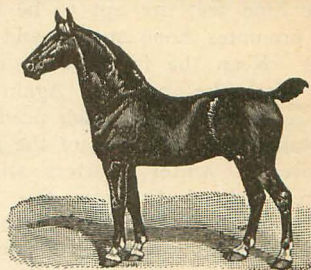
The fact that farmers will sell their stock of nearly suitable market age is not so serious to the future welfare of the farmers of our state as selling young stock and breeding stock, or in other words the seed which they should retain for producing another crop. Is it not fortunate that few of us would not think of selling all of the grain we raised for a given season when the price of grain was very inviting and no grain saved to resow the following spring? This is the thing we have seen done relative to the live stock problem. It will be done in this state this fall without question, and done on the supposition that grain will be as high for the next few years. If there is a wholesale dumping of stock on the market this fall, have you stopped to think what effect it will have upon the grain prices? With few farmers feeding stock, and the grain put on the market, it looks logical to me that grain prices will come down. If not this winter we are not far wrong in concluding that they will not be as high next fall and with a possibility of their being very low: so, low, in fact, that by having some class of stock to feed the grain, it would net a good fair price. And that is where the danger lies. Beware, farmers of North Dakota, as you may be empty handed next year, without any live stock as a means of getting for the grain you raise a reasonable price. Because grain prices are high this year is no proof that they will be one year from this, but there is a good reason to believe that the prices of all classes of live stock will be higher, because the supply will be deficient due to this year's wholesale marketing.

### THE COLT'S FEET

A point which is often overlooked—according to the Farmers' Tribune—in the hurry and bustle of summer work on the farm is the keeping of the colt's feet level. Oftentimes yearlings and two-year-olds are turned to grass with their toes too long and their feet far off the level. This promotes all sorts of unsoundness. It only takes a few moments with a chisel and mal-

Warranted to Give Satisfaction.

## Gombault's Caustic Balsam



### Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

## The Cream of Cream Separators

The Sharples Dairy Tubular is the cream of cream separators—the pick of the whole bunch. Supply can wait low, you can fill it with one hand. All gears enclosed, dirt free, absolutely self-oiling—no oil holes, no bother—needs only a spoonful of oil once or twice a week—uses same oil over and over. Has twice the skimming force of any other separator—skims twice as clean. Holds world's record for clean skimming.



Bowl so simple you can wash it in 3 minutes—much lighter than others—easier handled. Bowl hung from a single frictionless ball bearing—runs so light you can sit while turning. Only one Tubular the Sharples. It's modern. Others are old style. Every exclusive Tubular feature an advantage to you and fully patented. Every Tubular thoroughly tested in factory and sold under unlimited guaranty. Write immediately for catalog J-195 and ask for free copy of our valuable book, "Business Dairying."

The Sharples Separator Co.,  
West Chester, Pa.  
Toronto, Can. Chicago, Ill.



let, a blacksmith's knife and a rasp to level off the feet. Pick up the foot, let it hang downward as naturally as possible and note which side is the higher. Then rasp off the high side. Get the foot level. The inside walls of the hind feet are apt to be high. That promotes bone spavin and bog spavin. Keep the inside walls down level with the outside. Again for some reason or other which need not be detailed here, the toes of the front feet are, in winter quarters and in pasture, inclined to grow too long. Keep them short. The colt will then stay back on his pasterns as he should, and sidebones and other troubles will be avoided. Do not get the inside quarters lower than the outside in the hope that it may save trouble later—that is, save the trouble of leveling the feet later. Just keep the feet level and no more, and see to it that an examination is regularly made. A blemish makes a wonderful difference in the value of a horse. Time employed in keeping the feet of colts level will pay at about the rate of a dollar a minute, as a general thing.

#### THE ARAB HORSE

An Arab, whom I recently met at Sydney, assured me that members of one breed of Arab horses were never allowed to leave the country. This particular breed is regarded as sacred by the Arabs, who are told in the Koran that when the last great fight, in which all of the nations of the earth will be engaged comes the horses of the sacred breed will bring the people of Arabia victory over all races. It is a great offence for any Arab to negotiate for or in any way entertain overtures for the sale of a horse of the breed, and is even punishable by death.

The wild Arab loves his horse, but he has need of him to live. Inside Morocco horses are used for either war or luxury.

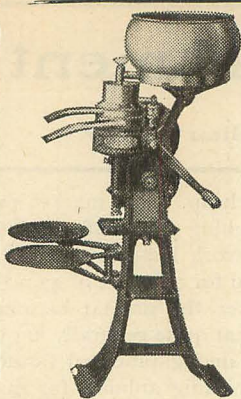
Mr. Cunningham Graham says; "None of the horses I saw would be of any value in the European market, except to an artist, but for the country where they were bred they were most servicable, hardy, and indefatigable, sober beyond belief, eating their corn but once a day, drinking but once, and up to any weight. And if not quite so fast as might be wished, still a glory to the eye."—Live Stock Journal.

#### BREED PURE BRED SIRE

##### W. F. McSparran

Hoard's Dairyman gives an interesting article on breeding—

A gentleman who had a good grade Jersey cow bred her to a grade Jersey bull; then he secured a grade Guernsey bull to try to break into the high record ranks of dairy cow breeding.



## THE Cream Separator CREAMERYMEN USE

Today over 98% of the world's creameries use DE LAVAL separators. This fact means much to every cow owner. Without the separator creamery operation would be almost impossible. No matter whether the creamery is buying whole milk or cream its success rests upon the centrifugal cream separator. Those who are buying whole milk skim it at the factory with DE LAVAL Power machines—those who are buying cream advise their patrons to purchase DE LAVAL Hand machines. The biggest and most successful creamery company in the world is buying cream from more than 40,000 patrons to whom it has sold DE LAVAL Hand machines, after many years of experience with all kinds of separators. Had the DE LAVAL not been the best and by far the most profitable separator for anyone owning two or more cows, this great creamery would never have taken the responsibility of placing them with its patrons. And this is true in hundreds of other instances, for creameries can be found in every part of the world having from a few hundred to many thousands DE LAVAL patrons. Wouldn't it pay you to find out why experienced creamerymen prefer the DE LAVAL to other separators? You may learn the reason by asking for a DE LAVAL catalog, or better still a DE LAVAL machine—to examine and try out at your own home free of all expense. Don't wait, but write us today.

### THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS.  
CHICAGO  
1213 & 1215 FILBERT ST.  
PHILADELPHIA  
DRUMM & SACRAMENTO STS.  
SAN FRANCISCO

#### General Offices:

74 CORTLANDT STREET,  
NEW YORK.

173-177 WILLIAM STREET  
MONTREAL  
14 & 16 PRINCESS STREET  
WINNIPEG  
107 FIRST STREET  
PORTLAND, OREG.

## BOSARD FARM JERSEYS

### LOTTIE MELIA ANN'S KING,

Son of the Great Fifteen Thousand Dollar Bull, Melia Ann's King, has Ten Tested Sisters, Among Whom Are,

DOVE MELIA ANN, who at three years old gave 1705 lbs. of milk in 42 days, about 43 lbs. per day, and made 18 lbs. 11 oz. butter in a week,

ELOISE MELIA ANN, who milked over 40 lbs. per day, and made 17 lbs. 12 oz. butter in a week, at three years.

MELIA ANN OF LONGVIEW, who as a two-year-old, milked 45 lbs. in a day, and made 15 lbs. ½ oz. butter in a week,

LOTTIE MELIA ANN, his dam, has a record of 21 lbs. 2 oz. butter in a week, 9250 lbs. milk in a year, 25120 lbs. milk in three years, and is the dam of three tested daughters

PEER'S SURPRISE, a sister of the sire, holds the world's record for both milk and butterfat in an authenticated year's fat test; 14452.2 lbs. milk, 643.61 lbs. fat, or 769 lbs. butter.

EMMA'S ROWENA, an inbred Melia Ann, stands second to Peer's Surprise, 10383 lbs. milk, 760 lbs. butter.

#### SOME OF HIS SONS FOR SALE.

Address, J. H. BOSARD,

GRAND FORKS,

NORTH DAKOTA



He had the thing all reasoned and figured out so nicely and was so confident of results that I forced my wise head to keep a still tongue.

Working from the starting point, that like produces like, as the first law on the tablet of the breeder, breeders of experience know that results cannot always be forecasted and are most always satisfactory when two very well known individuals are mated.

I do not think it has ever been settled that because a certain bull and a certain cow copulating can produce females of pronounced excellence, that in the case of a male issue from such mating, we have any positive assurance that he in turn will infallibly produce female offspring of pronounced superiority. But assuredly from such a male we have our most reasonable expectations of meritorious offspring, given female mates equal to the male in performing inheritance.

All full sisters as cows are not always of equal robustness of constitution nor of dairy performance. There is always the quality of variation, beyond our control as yet, and which we must always take into consideration; but in such continuity of breeding we have eliminated uncertainties to a minimum.

If our careful and most observant breeders acknowledge the limitations, the variations, the defections, that often in a measure, defeat their best laid plans, if they admit that we do not yet have such a knowable responsiveness in our females, in any of our breeds, that we are always sure of like producing like, how utterly, hopelessly, he must be working in the dark who brings an un-

## "A Spoonful to a Feed"

# Swift's Soluble Blood Flour

—for Calves

(87 per cent Protein)

Address

**Swift & Company**

Union Stock Yards CHICAGO

Animal Food Department  
Division



Swift's Soluble Blood Flour costs the feeder less than 4 cents per pound and will do more than any other feed in keeping his calves bright and healthy and growing right along. Ask for our Booklet, "Little Talks to Stockmen," which tells all about it.

## Grand Auction Sale At ENVILLA STOCK FARM, Cogswell, N. D., Wednesday, Oct. 23.

60 Head Registered Angus Cattle  
40 Cows. 10 Bulls. 10 Calves.  
30 Head Shetland Ponies.  
10 Head Standard-bred Colts.  
40 Head Registered Duroc Jersey Sows  
and Boars.

30 Head Registered Imp. Yorkshire Sows  
and Boars.  
20 Head Registered Hampshire Sows  
and Boars.  
80 Head Angora Nannie Goats.

The above stock has won the blue ribbons this fall and for the last three years at all the State and leading County Fairs of the Northwest and absolutely represents the best individuals and most popular breeding to be found in America.

A trip to the Envilla Stock Farm, the greatest breeding establishment in the west, will be the best paying investment you can give your time to. There will also be offered 2000 head of pure bred chickens, turkeys, geese, ducks and pet stock, including all varieties, in lots to suit. Do not fail to attend this the greatest sale ever held in America.

L. H. WHITE, OWNER AND MANAGER



known, unproven male to mate a cow or head-herd where such individual merit as may be present is most likely to be freakishly accidental?

If such mating should produce a cow of outstanding worth, what hope can we entertain that the effort can be duplicated in merit? And if such a cow can come at random thru the inscrutable workings of natural tendencies, how shall we manage the next cross, or tell just when and how the tendencies of nature are in the proper juxtaposition for us to do it again?

But why should we scold at the lay brother who thinks he can take up the fringed and ragged ends of breed and bring them together into a combination of beauty and usefulness and profit, when we have but to look to the seat of our political professional agricultural fathers at Washington, who with public money propose to try the same uncalled for experiment both in horses and cows?

#### Working Backward.

My friend with the good grade cow of Jersey extraction is a very intelligent man, a member of one of the "learned professions," but I may observe in passing that there are lots of things that many of the members of these professions do not know—especially about farming; I would have told him to work toward concentration and not toward diffusion; to endeavor to so wisely breed, feed, and select that the characteristics sought should be fixed into to prepotent traits and habits, to the end that he might help along the work toward the time when we can more confidently assert that like produces like, that he should work toward these things and not go about the offensive, destructive, senseless task of tearing down and wasting the good work of other men who have builded much wiser than he could know.

If he wants to breed Jerseys, let a good, pure bred male of that breed be put at the head of his herd. If Guernseys are his choice, fatten and sell the grade male he has of that breed and buy a perfectly good one with a strong, long pedigree of note-worthy ancestry, and get right into the Guernsey fraternity.

I suppose our progressive breeders, representing the different classes of farm animals, know more about the philosophy of good breeding and the facts that can be demonstrated in practice than the men not in the breeding class and I think it is a fact well worthy the earnest deliberation of those worthy friends of mine who want to create and establish something new in cows and horses, that many of the present most advanced and authoritative genuine breeders of animals of pure blood and enlarged usefulness, in special directions, are graduates from the class in which these latter-day,

newly called experimenters are (pardon the language of the calf pen and sheep fold)butting.

### Registered Red Polled Cattle

Young stock of both sexes for sale  
C. G. FAIT & SON, MONANGO, N. D.

**CREAM IS MONEY**

The chief reason you want a separator is to get more cream—more money—out of your milk. Of course you want to get the most, and you naturally want the separator that gets the most cream.

**U.S. GETS ALL THE CREAM**

Holds World's Record for CLEAN Skimming

Marshfield, Vt., Feb. 2, '07.  
I bought one of the—machines, but after running it a little while I found it was not skimming clean. I had it tested at the creameries here and found it to test 1 per cent, and I could not stand this so exchanged it for one of the U. S. machines, and find that if I had given the other machine away I should have made money by so doing. I like the U. S. very much.

ALMON TUCKER.

The U. S. is also the simplest, strongest, safest separator. Only two parts in the bowl—easy to wash. Gears turn in oil and run surprising easy. Lasts for many years with ordinary care.

Let us tell you ALL about it. It's money in your pocket right away to know. Just write, "Send me new Catalog No. 127." The pictures tell the story. FREE TO YOU. Write today, addressing the

**VERMONT FARM MACHINE CO.**  
Bellows Falls, Vt. 478  
Eighteen Distributing Warehouses



### MY SECOND ANNUAL SALE ABERDEEN ANGUS CATTLE

At My Barns, Valley City, N. D., Saturday, November 2, 1907, 1 o'clock P. M.

40 head from my matchless herd of Angus at the buyers own price.

20 cows and heifers bred and with calf at foot, 10 choice young heifers.

7 royally bred young bulls.

The quality of the cattle is well shown in their record in the northwest-ern fairs this season.

GEORGE A. MCFARLAND,  
Valley City, N. D.

#### Red Polled Cattle.

I have for sale a number of choice Red Polled Cattle all registered. Herd established twenty years and now headed by such bulls as Roscoe, Stout, Slasher and Falstaff. Address,

C. M. CHAMBERS,  
Bartlett, Iowa.

### Registered Black Percheron Horses and Red Polled Cattle.

Yamagata, 40966, 1st premium, gold medal and championship at N. D. State Fair 1906.

Zip 13342, herd bull, first prize winner and sweepstakes N. D. State Fair 1905.

YOUNG STOCK FOR SALE.

CENTER LANE STOCK FARM,

Kenmare, N. D.

#### AUCTIONEER

PEDIGREED LIVE STOCK AND  
LARGE FARM SALES.

REFERENCE: Any pure blood breeder in the Northwest.

Graduate National College of Auctioneers.

FRANK H. HYLAND,  
Devils Lake, - - - - - North Dakota

### FOX TERRIERS, BEAUTIES.

(Thorobred) DUSKY TRAP STRAIN,  
Colors Black, White and Tan,  
Buff and White,  
Tan and White.

"DEAN FARM"

Box 182, Mayville. North Dak.

## LOOK YE HERE

Go to any of our dealers and buy a package or pail of Guarantee Stock Food, take it home and use it according to direction, to any animal for a test. Pick out your worst specimen on the farm if you like, and after a fair trial should you not be fully satisfied with results, let us know and we will return the money.

## Guarantee Stock Food

contains ingredients that will surely benefit your animals, not only while you are feeding but also after you quit feeding. This is no theory only, but facts founded on knowledge, experience and practice, and can be verified by thousands of our customers.

Guarantee Stock Food Company,

GRAND FORKS,

NORTH DAKOTA



# Among the Swine

O. R. ANEY, Wilmot S. D.

It is the food digested, not the amount of slops gorged.

Remember that alfalfa makes a fine feed for the hogs.

With a sixty per cent crop of hogs we are sure to have good prices the coming winter.

A 200-pound pig at 8 months is a better holding than one of the same weight at a year old.

It is a pretty good rule that hogs may be fed at a profit when the corn costs 10 cents a bushel for every \$1 per hundred-weight of the finished product.

Out of 1477 litters it has been found that there were farrowed 6625 sows to 6660 boars; in other words the proportion of sows to boars was about 200 to 201.

Keep on feeding sour, unhealthy slops to the swine, if you would have your young pigs suffer from scours. Don't waste time in making inquiries regarding a remedy.

Where hogs have had a good run on pasture during the summer months, they will, when confined to a small pen, and fed on a concentrated ration, take on flesh very rapidly. It ought not to require over ten bushels of corn or its equivalent to put a hog on the market in prime condition. When the hogs have acquired about the right amount of flesh by watching the market closely one can easily decide when it is about time to sell. It very seldom pays to hold hogs after they are ready for the market and what few cents' raise one would get by holding on for a week or so would not pay for the extra feed.

The following feeding formula has been recommended by Theo. Lewis:

"Take six bushels of corn cob charcoal, or three bushels of common charcoal, eight pounds of salt, two quarts of air-slaked lime, and one bushel of wood ashes. Break the charcoal well down, with shovel or other implement, and thoroly mix. Then take one and one-quarter pounds of copperas and dissolve in hot water, and with an ordinary watering pot sprinkle over the whole mass and then again thoroly mix. Put this mixture into the self-feeding boxes, and place where hogs of all ages can eat of their

contents at pleasure. The charcoal furnishes the required mineral matter which has been lacking in the food, and is also an excellent corrective for digestive troubles, while the copperas is a valuable tonic and stomachic."

## DIRTY AS A HOG

What a slander the above, which we often hear, is on his porcine majesty. It is a fact that scarcely any animal that has been domesticated will take as good care of himself as will the hog. True, he likes a bath, and from many years of enforced inability to have clean water to use for that purpose, he may wallow in a mud puddle, but then mud is no really dirty. Given the chance the hog will keep his bed clean, an act that few domesticated animals will do. The hog may eat what we do not consider clean, but the dog, fashionable that he oftentimes is, will outdo him, and the chicken is so far beyond the hog in this line as to scarcely be mentioned.

The hog likes to get into contact with

## 28 POLAND CHINA BOARS FOR SALE

Farrowed in February, March and April. Heavy bone, good length, deep bodies. Sired by two large boars from leading strains. Pedigree furnished. Call or write to.

CHAS. POGREBA, Montrose, Minn.

## PLEASANT GROVE HERD

### Shorthorn Cattle, Poland China Swine

We are making a specialty this season of shipping spring pigs. By shipping when not too large the express bill is lighter. We can supply boars and sows not related. Write us for descriptions and prices.

WINN BROTHERS,

Redwood Falls,

Minn.

## POLAND CHINAS

We have for sale several choice spring pigs sired by "Giant Perfection" No. 3477, a grandson of Chief Perfection, the 2nd, the greatest hog the Poland China breed has ever produced. **CENTER LANE STOCK FARM,** Kenmare, North Dakota

## GREENVIEW STOCK FARM

Has 100 Poland China young pigs, sired by Rockwell Chief, Corwin U. S. 2nd and Prince Corwin. Sows strongly bred of Tecumseh blood. Orders booked now for fall delivery.

Pure Scotch and Scotch Cross Shorthorns. Young and old stock for sale. Call or write if you want North Dakota bred Poland Chinas or Shorthorns.

E. C. BUTLER,  
Cooperstown, N. D.

## WHETSTONE VALLEY

### Stock and Poultry Farm

#### POLAND CHINA SWINE

#### SHORTHORN CATTLE

#### SHORPSHIRE SHEEP

## Sale of Cattle, Hogs and Chickens

Having rented my farm I will close out my entire herd of hogs and cattle at bargain prices. Also my fancy poultry. Chickens at \$6. per dozen either breed. Ducks 4 for \$3. Turkeys 3 for \$5. Order quick.

Long Distance Phone.

Express U. S. and Gt. N.

O. R. ANEY, - - Wilmot, S. D.

IF YOU WANT GOOD STOCK WRITE US.



mother earth, so does the child, and it is healthy for both. With green grass and plenty of fresh water the hog keeps as clean as any animal, and when penned and bedded the same is true. He eats what is put before him and when cleanly fed thrives most gloriously. Don't compel the hog to be filthy and then complain that he is so.

Thoro cleanliness and proper feeding has much to do toward the prevention of hog diseases. And the farmers who follow out this line of care are less liable to have hogs die with cholera than others who do not. We do not mean that properly managed hogs never get cholera, but do believe they will escape infection when herds not so managed will succumb. Moreover, as has been said scores of times, most so-called outbreaks of cholera are not that disease even where most of the herd dies.

The use of proper disinfectants, of dips to kill lice, and worm remedies as needed, will do much to keep the hogs of the country on a paying basis. Give the hog a chance to keep clean and do not slander him.

## MAPLE GROVE STOCK FARM.

HOME OF THE GREAT J'S PERFECTION,



Winner of first prize at three state fairs, 150 March and April pigs extra large and heavy boned, sired by J's Perfection. He weighed 840 pounds. I have been breeding Poland Chinas 15 years and I have the greatest herd in the northwest. I sell my pigs at farmers' prices and guarantee satisfaction. Come and take your choice or write  
W. J. GRAHAM, Howard Lake, Minn.

## POLAND CHINAS

75 MARCH AND APRIL PIGS FOR SALE

If you want a boar to head your herd; one with strong, heavy bones and the best back and hames you ever saw on a spring pig, I have them for sale. My pigs have short broad heads and are extra well marked. Write for what you want. I am sure I can satisfy you. Pedigree furnished.  
J. S. Bergquist, Dassel, Minn.

## WILLOW GLEN SHORTHORNS AND POLAND CHINAS.

The home of the Sweepstake's sow at Interstate Fair, Fargo, N. D., 1907. Herd headed by Chief Perf. 3rd sired by Chief Perf. 2nd the greatest hog the breed has produced. We have for sale choice spring pigs of both sexes by four different boars. Can furnish pigs not related. Have a four year old herd bull a grand son of Nominee and a eight-months old bull calf for sale. Prices reasonable, quality considered. Address

AXEL W. PETERSON,  
White Rock, S. D.

## WOOD LAWN CENTER POLAND CHINAS



75 PIGS AT FARMERS' PRICES. March and April farrow. They are the kind that grow big and bring big litters. They are sired by UN-DEFEATED CASHIER, weight 750, and PERFECTION KING, weight 500 at twelve months. Pedigrees furnished. Satisfaction guaranteed. Order now to save express. Come and see them or write to  
JOHN DEVANEY, Waverly, Minn., On G. N. Ry.

## Poultry Department

By MRS. B. F. WILCOXON.

A scared hen makes a poor layer.

Fried chicken is an improvement on a scrub chicken.

Rub lard mixed with a little kerosene on hens' legs affected with scale.

Lay in a supply of dust for the winter, for it is a rather scarce article in mid-winter.

Do not let the rooster run with the hens within three weeks before packing the eggs.

The best breed of hens to select is your own fancy, then study that breed and buy the purest stock.

Scratching is as essential to the health of the hens as is bodily exercise to the human family.

Don't begrudge the hen the privilege of setting. She will be in much better

condition for laying even after she has vainly attempted to hatch some glass eggs.

In feeding bear in mind that there should be about one part muscle-producing to four parts fat-producing materials. Oats, if hulled, are said to be an ideal food.

Go after the mites and keep after them. Don't let lice sap the life out of the poultry. Kerosene is a deadly enemy to lice on the roosts and walls; sulphur and slacked lime in the nests; also sulphur in the dust bath.

### POULTRY WORK FOR OCTOBER

The following from the "Industrious Hen" is timely and full of sound advice.

It is time now to put up your pullets. Go thru them carefully and select those you will keep, put them in their winter quarters so they may become accustomed to the houses and runs by the time they begin to lay. If you wait too

long they may be checked up in their laying till cold weather comes and then maybe till spring. In culling it might be well to make three selections—those for show, those for future breeders, and those for market eggs alone. Get rid of all surplus cockerels, it does not pay to keep them any longer; caponize those three to four months old, and you will have something fine around Christmas, both to sell and for your own table.

With your pullets up and the cockerels disposed of, you can turn the older hens out on free range for a couple of weeks or longer if the weather is right. It will give them a rest and vacation, and when you pen them again they will be in fine shape for the business of the winter and the succeeding breeding season. If you have not done so, put the males by themselves and let them stay there till you are ready to make your matings. Fix those leaky roofs now; go carefully over them all and fix up such places as are likely to leak. It's not too late to plant turnips or rape for winter forage. Plow or dig up the yards before putting the birds in them. If possible, have extra runs which you can plant now. If this is not possible, fence off a corner in each run and plant that for green feed.

Before putting the birds in the pens and runs, dust them carefully with lice powder, whether they have lice or not,



tho it is seldom that the latter is the case. The houses must be white-washed, the roosts taken down, soaked in oil and burned off, all the old litter removed and the nest boxes must be cleaned, sunned and oiled or white-washed before putting the birds in. Beef scraps should be fed now, and sunflower seed especially, for your young show birds; be sure to give plenty of charcoal to prevent indigestion and also for their general good health. Get rid of your old hens now, except a few extra good ones you wish to keep for breeders; put them up for ten days and feed on moistened cracked corn and corn meal. Keep them in clean, partly dark, and rather confined quarters. In this way they will fatten rapidly.

If you have any late hatched chicks, give them sheltered quarters so they can keep out of the chilly fall rains; give them extra care and feed. If you have clover on your place, or can buy any, get some second growth and put it up for the chickens next winter; they will eat it dry or you can steam it for them. Now is the time to get some road dust, put it in barrels and boxes under shelter for winter use. Collect all the leaves you can; they make a fine litter for hens to scratch in. Put away all your brood coops, clean the brooders up, and house them for the winter; they will last you much longer. Look over your incubators, see that the moths have not eaten up the felt in them. Look them over and order now any parts which may be missing or damaged.

Attend your nearest poultry show; it will be a pleasure and of value to you. Pick out some birds for the winter shows, get all the likely ones together where you can see them daily and cull down to the best; keep them in clean straw and out of the rain. When you have some picked out, begin to train and room them well in advance of the show, six weeks or a month before hand. If you have anything to sell now is the best time to begin your advertising. Business is being done now more and more in the fall. Resolve to keep an accurate account of your poultry operations and do it. It will be a source of pleasure as well as profit to you. To succeed you must work, then work a little more, and finally work some more.

#### HEALTHY POULTRY ON THE FARM

The two hundred egg hen cannot produce her 200 eggs a year, it goes without saying, unless she is healthy. It is equally as important that the 125 egg hen and the broilers too, should be healthy, if they are to make the chicken

raiser any money. A timely discussion of the question of chicken health—for chicken discussions are always timely at any period of the year—is presented in a bulletin now in page proof and soon to be issued by the Department of Agriculture. It is based on some work of Dr. C. A. Carey, of the Alabama Experiment Station. Starting with the water supply for the poultry yard, it is suggested that water should be first, pure, and second, that the water vessels should be cleaned daily with boiling hot water. This may seem to be considerable trouble but it is stated to pay. No less of importance, of course, is feed, as related to health. More young chicks, Dr. Carey states, die from over-feeding and from sour, decomposing feed than from any other cause. This is especially true where mashers or liquid or moist foods are used. Some poultrymen use milk with dried or coarse meal in it. Milk is a "good food", but if given to chickens, it must be fresh or cooked with the meal or bread in it and fed as soon as cool. Never leave the excess to sour. It is also cheapest and best for the health and growth of the chickens to buy separate grains and grit and do your own mixing."

#### Arrangement of Houses

Some salient points are discussed under this heading. Most yards and runs are, it is stated, too small and insufficient in number. The placing of 20 or 40 chickens in a small yard—say 50 to 100 feet—and keeping them there 8 to 12 months in the year is one of the means of intensifying the propagation of intestinal parasites of all kinds. The fewer the birds and the shorter the time they are kept in a given place, the less, in degree, is infestation. "The poultryman should have at least three extra yards and runs into which to shift the disinfected coops and birds as soon as their runs and yards become infested. This may seem extravagant, but it is the only means by which you can breed healthy, vigorous birds without an immense outlay in cleaning and disinfecting yards and runs. Immediately after vacating a yard or run, plow it up and seed it down to wheat, rye, oats, barley, cowpeas or anything that will make a growth upon which the chicks can graze when turned in." Old and young chickens should not be allowed to run together. It is best to have young chickens in a run where no old ones have been for 6 or 8 months. This will prevent the young ones from becoming infested with the roundworm and the tapeworm.

Dr. Carey recommends that when new fowls are secured, they should be confined in some place remote from the flock for several weeks, in order to determine the presence of such infectious diseases

a cholera, a precaution which may save the flock.

In spite of the greatest care, however, insect pests and destructive diseases may get into the flock and require remedial spraying etc. To meet such conditions a number of useful solutions are given. Dr. Carey recommends that every farmer and poultryman should take one or more good journals devoting space to poultry growing and should also get all the publications on the subject issued by the Department of Agriculture and by his individual State Experiment Station. The bulletin in question will be Farmers' Bulletin 305 and can be obtained when issued, from Senators or Members of Congress or from the Secretary of Agriculture.

## Big Money in Poultry

### STOCK, ETC., FOR SALE.

Write for my Catalog of Poultry and Supplies.

Mrs. B. F. Wilcoxon,

FORT DES MOINES, - IOWA

#### OUR BIRDS WIN

**EGGS** | 45 prizes at 3 shows. 15 varieties of Poultry, Ducks, Geese, Turkeys. \$1.25 to \$1.50 per setting. Catalog free.  
MANKATO NR'S Y AND P'LTRY YDS., Mankato, Minn.

### S. C. WHITE LEGHORNS

raised on

#### CHALLENGE POULTRY FARM

are prize winners and good layers. Eggs for hatching \$5.00 per 100. Incubator chicks \$1.50 per 12

A. N. LANGWORTHY, Prop.  
Dodge Center, Minn

**WHITE WYANDOTTE EGGS** LESS THAN HALF PRICE.  
\$1 per 13. \$6 per 100.

Our prices have always been \$2 to \$5 per setting, and the eggs are worth it, but we now have all the chicks we can care for and shall set very few eggs after May 1st. These eggs will be from our finest pens: from big, strong, vigorous, healthy, high-scoring profit-makers, that we have bred up by our system. They will hatch lots of chicks, strong chicks, that will make winners and layers and fill your pocket-book. We will ship promptly. The quality will surprise you.

#### WEST LAWN POULTRY FARM

E. C. Willard, Prop.  
111 Moreland Ave., Mankato, Minn.

### SPECIAL OFFER ON STANDARD-BRED POULTRY

Barred, White and Buff Plymouth Rocks; White and Silver Wyandottes and S. C. White, Brown and Buff Leghorns at only \$1.00 each. Eggs from all varieties at half price. Send me your order for either stock or eggs and I assure you that you will be more than pleased.

#### DAKOTA POULTRY FARM

A. K. Johnson, Kensal, N. D.



## AMONG OUR ADVERTISERS.

A trial of the "Bull Dog Suspenders" will convince you that they are superior to all others. You do not have to crawl up your back to find the loop.

Chas. Pogreba, of Montrose, Minn., is offering some pretty fine boars for sale. If you have not yet selected a boar to head your herd, write him for terms. His animals are from leading strains.

The readers of the North Dakota Farmer will miss it if they do not take advantage of the sale of pure bred stock at the Envilla Stock Farm. Mr. White has the right stuff. Do you want it?

On another page is an advertisement of the Jumbo Succotash Separator and Cleaner. This new process grain cleaning machine proved to be one of the interesting attractions in the Machinery Hall at our 1907 State Fair. All information can be obtained by writing to the Minneapolis Separator Co., Minneapolis, Minn.

Among the new advertisers this month is C. M. Chambers, of Bartlett, Ia. The herd of Red Polled cattle owned by Mr. Chambers was established in 1887 and now contains 100 animals. Such bulls as Roscoe, Stout, Slasher and Falstaff figure largely in the makeup of the herd. The herd bull at the head of the herd weighed at the beginning of the season 2388. He was bred and raised in the herd and a good number of the offsprings are sired by him. Some of his get have weighed 925 and some 1050 at 12 months old. Such a showing will attract all Red Poll buyers.

We have received copy of the Special "Majority Number" in The Weekly Live Stock Report, published at Chicago by John Clay (senior member of the firm of Clay, Robinson & Co.) which is a highly creditable specimen of live stock journalism. The body of the paper is made up of interesting and useful matter, including a valuable article by A. S. Alexander, V. S., on the "Need of Persistency in Breeding"; a fine description "The Sea and the Selkirks", illustrated with some splendid photographs of mountain scenery, together with other special articles, illustrations, etc., the whole making a very fine issue and one which does great credit to both The Weekly Live Stock Report and the firm of Clay, Robinson & Co.

**When Answering Ads Please Mention The North Dakota Farmer.**

### THE PALMA TROPHY WINNERS

The greatest Rifle Match held since 1903 was shot at Ottawa, Canada, on September 7th. The American Team consisting of eight shooters, won the Palma International Trophy Match, which was open to the military teams of the world and was contested by the best military shots from England, Canada, Australia and the United States. The winning score of the team was 1712. The other teams ranked as follows: Canada, 1671, Australia, 1653, Great Britain, 1580.

The Union Metallic Cartridge Company by furnishing superior U. M. C. cartridges gave to the finest team which ever represented America, a decided and winning advantage as was admitted by the press of the United States and Canada. The following telegram was sent: "Union Metallic Cartridge Co.,

315 Broadway, New York City.

The victory of the American Rifle Team in the Palma International Match at Rockliffe is due in large measure to the excellent quality of the ammunition supplied by you, giving our marksmen perfect confidence and the opportunity to make record scores.

N. B. Thurston, Capt.,

American Rifle Team."

President Roosevelt gave the winning team a reception and King Edward telegraphed congratulations. The team unanimously chose U. M. C. ammunition after an exhaustive test of all other makes and the results of the match justified their choice.

## "NEVER-SLIP"

### COLLARS

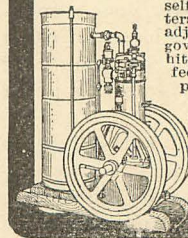
Made to fit well, wear well, work well. So stuffed that they form a very elastic pad which fits the horse's shoulders and neck without causing sores or galls. The whang-sewed rolled-edge on the front of collar is so shaped that the hames can not slip off the collar no matter how much too big they may be. Felt-protected seam on outer edge—felt takes wear off seam. Made of russet leather, cut from center of whole hides, the "Never-Slip" gives you more wear, more work, more comfort, with less bother than any other collar on the market, and you pay no more for it. See it at your dealer's; if he does not have it write direct to us and we will send our harness-book free. Write today.

**SCHEFFER & ROSSUM CO.,**  
238 E. 4th St., St. Paul, Minn.

## WHITE

### PORTABLE AND STATIONARY GASOLINE ENGINES

Vertical and horizontal designs, oil or water cooled, four cycle type, self cleaning adjustable igniters with early and late spark adjustable automatic ball governor of throttling or hit-and-miss types, sight feed gasoline vaporizer. All parts interchangeable. More than 100 designs. Self contained or with tanks detached. Economical, durable and easily repaired. Catalogue free. Globe Iron Works Co. Menomonee, Wis. Box 70



When You Travel, Enjoy the Superior

## DINING CAR SERVICE

of through Northern Pacific trains. A dainty breakfast, tasty lunch, or delightful dinner, thoroughly well served, will round out and vary the pleasure of your trip. The bill-of-fare is varied and attractive—the viands appetizing—the car attractive and easy riding.

### "GET YOUR MEAL ON THE TRAIN."

Through dining cars on all transcontinental trains. Cafe Car Service on "Lake Superior Limited" between Minneapolis and St. Paul and Head of the Lakes.



**Northern Pacific R'y.,**

A. M. CLELAND,  
General Passenger Agent,  
St. Paul, Minn.

Alaska-Yukon-Pacific Exposition, 1909.



---

---

# Copper Brown and Copper Verde

---

---

The fashionable House Paint Colors for 1907.

Made on carefully prepared formulas to look well  
and last long.

For sale by all up-to-date dealers, in sealed cans  
only.

A Pamphlet full of useful paint information, entitled  
"Prepared vs. Paddled" sent free to any address, on  
request to

**The Paint Manufacturers' Association  
of the U. S.,**

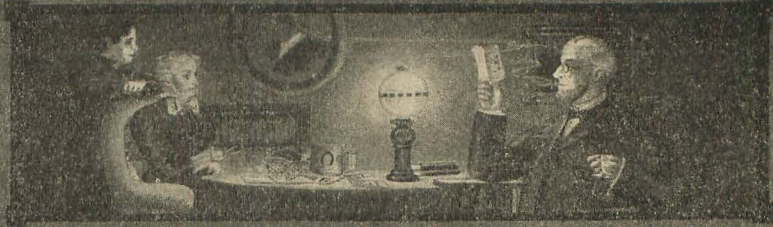
636 The Bourse, Philadelphia, Pa.

---

---



## STORIES OF WAYS TO MAKE THE HOME BEAUTIFUL



### THE HORSE SHOE BRAND

To produce the highest quality in paint, there must be but one incentive; the will to do it. If the question of profit or individual preference is allowed to influence or prejudice its composition, success in reaching perfection is balked.

Science can recognize nothing but truth. Intention may be honest and desire laudable but if either swerve from the fixed principle of law and fact the discovery of truth must wait for the unbiased mind to reveal it.

The **HORSE SHOE PAINT** is made of materials recognized and accepted by all authorities practical and scientific as the best known for paint making. There is nothing in it about which there is any question or dispute. It's a pure zinc, lead and linseed oil paint, with the necessary pure drier and tinting color. All standard, nothing experimental.

When all authorities are as fully agreed as they are on zinc, lead and linseed oil, that some other material is necessary to improve it, we will add that to its composition. Until then the **HORSE SHOE BRAND** will remain as it is, a composition of the standard paint materials, free from everything doubtful or experimental. That is a course equally safe for all parties.

### Mound City Paint & Color Co.,

ST. LOUIS, U. S. A.

Norris B. Gregg, Pres.

Wm. H. Gregg, Jr., Vice Pres.

E. H. Dyer, Sec'y.

